

CITY AND COUNTY OF BRISTOL

ANNUAL REPORT
OF THE MEDICAL OFFICER OF HEALTH, 1948.

My Lord Mayor, Ladies and Gentlemen,

It has not been easy this year to compile an annual report which includes a survey of medical institutions in the city and their work during the year. July 5th, 1948, was the appointed day and certain services were transferred to the Regional Hospital Board, together with many staff, some of whom were concerned with the operation of services that remained with this department. However, for the purpose of maintaining the records of the department, a special effort has been made to include in this report all information obtainable.

The people of Bristol may well be proud of the standard attained by the Bristol services that were transferred on the appointed day. This statement is true not only of those operated by the Corporation itself, but also of those controlled by the voluntary organisations in the city. Indeed one of the features of the services was the fact that co-operation and even integration had gone so far that there existed a very happy spirit of goodwill in the combined effort to serve. A good example was the specialist service. A joint committee of the City Council, University and voluntary hospital became responsible for making all appointments of the grade of registrars and upwards; all specialists were appointed to serve the three bodies as required at terms agreed between them. The underlying idea was to maintain unity of the medical services in the city. The City Council itself in regard to the payment of specialists for hospital work were not satisfied with either the "per patient" or the sessional basis and therefore operated a scheme whereby a fixed salary was paid for the supervision of "beds" according to the nature of the work, the number of beds and the average time expected to be spent. There were also close working arrangements between the different hospitals of the city and these did actually function because of the goodwill of the staff operating them. Thus to relieve the Royal Hospital of some of the work involved by taking all casualties from the area, the municipal hospital undertook to take over responsibility for two nights every week.

The municipal hospitals had been developed in accordance with a prepared scheme over a period of years. Ham Green Hospital and Sanatorium, which had been the property of the Corporation for 56 years, had undergone great changes in the last twenty years. The sanatorium part had been largely rebuilt. A central electric kitchen had been erected and a new nurses' home. Seventy-five beds in special single or double cubicles had been erected for infectious cases and a scheme prepared for the reception of smallpox cases from the port or adjacent areas if required. The equipment had been modernised by the installation of electric sterilisers in each ward and by other means, and an annual sum was set aside every year for refurnishing the homes and the wards. A scheme had been prepared for complete central heating of the buildings and parts of the scheme had been completed. Plans had been prepared for expansion of the hospital, but the Health Committee had always in mind that, with the success of preventive medicine (immunisation against diphtheria in particular) some day Ham Green must become a general hospital for the area: at the same time this might help the staffing problem. Charterhouse, on the Mendips, had been acquired as an annexe, and was found most useful for the classification of cases during the busy periods.

In regard to Southmead Hospital, great developments had been brought about since it was taken over in 1930 from the Board of Guardians. Apart from general improvements in the buildings a scheme was prepared before the war for extending the hospital. Under the leadership of the late Alderman Maggs the Health Committee decided, prior to the war, to proceed with the scheme in stages and half of the nurses' home (100), a maternity department (100 beds) and a health centre was erected. In those days it was not possible legally to provide a health centre as is understood today in accordance with the National Health Service Act, but the services in this new building were not intended to be given by specialists as the latter would be provided with facilities for "in" as well as "out-patients" in their ward units.

However, that part of the scheme was not developed because of the war. A scheme was also prepared for a new X-ray department and for reconstruction of the kitchen on modern lines. It is gratifying to know that these proposals have now been almost completed under the new management committee. An interesting experiment was undertaken—a library to provide a service for staff and patients. This scheme was prepared by the City Librarian, who was authorised to provide the service in a specially adapted building by the payment of an annual grant by the hospital committee. These plans have also been completed and are in operation.

In Frenchay an emergency hospital had been built on the park lands of the children's hospital and sanatorium. It was the intention of the city to keep the children with orthopædic conditions together and, as soon as Winford was able, to transfer the cases from Frenchay to the former. With regard to the pulmonary cases these would be treated in special accommodation in the adult sanatorium. It was the intention of the Health Committee to convert the children's hospital into a residential nursery—which could be linked with other nurseries in adjacent houses. All the responsibility in regard to residential nurseries has now been transferred from the health to the children's committee. It is important at this stage to record these schemes and these views, for although the new brooms may sweep clean it may be worth while, from historical interest, to record how and what the old local authorities were thinking in 1948.

In regard to the services at the city clinics, close co-operation has been established between the Health Department and the Regional Hospital Board. Although the City Council has powers to employ its own specialists for the purpose of the work carried out at the clinics, through the kindness of the Regional Hospital Board these specialists are provided free of all cost to the city. However these are not entirely specialist clinics for they are also served by health visitors and other public health staff—the specialists merely attending for the purpose of helping with the diagnosis and advice regarding supervision and after-care, and they form a valuable part of the team.

There still remains much to be done by the Health Department of the Corporation. That the people of Bristol appreciate the services provided at its health clinics is shown by the fact that between 13,000 and 14,000 persons attend weekly. Whatever the intentions of the National Health Service Act may be in its long-term policy, it would be difficult for this work to be undertaken in any other way for some years without impairing the service to the patient. In these clinics most of the services which local health authorities are empowered to provide are carried out.

There are moreover many other responsible functions which the local authority and its medical officer of health have to perform. Certain infectious diseases are notifiable: investigation of outbreaks of these diseases and their prevention are matters of great importance to Bristol homes. Tuberculosis is one of the most important of these diseases for it is responsible for about 600 new cases and nearly 300 deaths every year in our city. Nor is the position improving. We must review our plan of campaign against this enemy and concentrate our forces so as to try and prevent it from spreading. Let us at least—local authorities and their officers—show that we believe in prevention!

Sanitation is still as important as it was in the days of Edwin Chadwick. Sanitation in the home and outside it; cleanliness in the handling of foodstuffs—in the factories, in the restaurants and in the homes: the protection of our food supplies from contamination—intentional or accidental: all these are matters of great importance to the home and the family, and it is the home and the family—the foundation of our civilization—that the local authority is privileged to serve.

During the year Dr. B. A. I. Peters, medical superintendent at Ham Green Hospital and Sanatorium, retired after 38 years' service. I could not possibly exaggerate the value of the services that Dr. Peters has given to the Council and to the people of Bristol. His great experience, his skill and his enthusiasm stimulated all those with whom he came in contact. It gives me great pleasure to look back upon our happy association and to wish him and Mrs. Peters many years of happy retirement.

In conclusion, I would like to express my best thanks to the chairmen of the Corporation committees that have done so much to help the department during this transition period—particularly to the chairmen of the health and education committees. To the chief officers of the Corporation and their staff and especially to the Town Clerk, Mr. A. Pickard and his staff, my best thanks are due for their happy and willing co-operation and help.

I wish also to express my indebtedness to my deputy, Dr. Wofinden, and my chief administrative assistant, Mr. J. G. Watson, and to all the staff of the Health Department, for their loyalty and their enthusiastic assistance during a difficult year.

I am, my Lord Mayor, Ladies and Gentlemen,

Your obedient Servant,

R. H. PARRY,

Medical Officer of Health.

Department of Public Health,
Kenwith Lodge, Westbury Park, Bristol, 6.

VITAL STATISTICS.

Tables covering the vital statistics for the city are included in the Appendix, pages 126-169. These figures are based on information supplied by the Registrar-General, who has directed attention to the fact that the estimates of the numbers and distribution of the non-civilian population are not available and that non-civilian deaths and non-civilian notifications are excluded. The estimated population from 1940 onwards is therefore the civilian population only, and the various rates calculated on this basis are in consequence slightly overstated, whilst the rates for 1943 to 1945 are also subject to some further adjustment consequent on the correction of the Registrar-General's estimate of population of these years, particulars of which were given in my report for the year 1946.

	1948
Estimated civilian population (mid-year) ...	435,000
Marriages	3,786
Rate per 1,000 population	17.41
Births	7,831
Rate per 1,000 population	18.00
Stillbirths	175
Rate per 1,000 total births	21.8
Deaths	4,576
Rate per 1,000 population	10.52
Natural increase per 1,000 population	7.48
Deaths under one year	192
Rate per 1,000 live births	25
Deaths under one month	119
Rate per 1,000 live births	15
Deaths from puerperal causes	6
Rate per 1,000 total births	0.74

Matters of particular interest in the statistics, referred to in greater detail below, are:—

- Population of the city still increasing.
- Decline of birth-rate.
- The stillbirth rate is a low record.
- The death rate is a low record.
- The infant mortality rate is a low record.
- The maternal mortality rate is a low record.
- Low record of diphtheria incidence and no deaths—second (successive) year.
- No deaths from scarlet fever for three years.
- Measles—one death only resulting from high record incidence.
- Infantile paralysis—two less cases than high record of last year.

Population.

The Registrar-General estimates the civilian population of the city at mid-1948 as 435,000, an increase of 6,400 on the figure supplied for mid-1947. A subsequent publication by the Registrar-General estimates the civilian population at 31st December to have increased to 437,400. The mid-year figure has been retained, however, for the calculation of rates, where appropriate.

Marriages (Rate: 17.41 per 1,000 population).

There were 3,786 marriages during the year ended 31st December, 1948. This is 247 less than the previous year's figure (4,033), and is a little lower than the average of the immediate pre-war years.

Births (Rate: 18.00 per 1,000 population).

In my report at this time last year, I referred to the continuing rise of 1946 reaching its peak within the first quarter of 1947, and thereafter gradually declining to the level preceding the rise of 1946, after realising the highest number of births ever recorded in the city. This level was maintained for the first six months of 1948, but during the second half of the year there was a considerable drop.

During 1948, a total of 8,485 live births was recorded, being 1,597 below the 1947 figure (10,082), and 444 below that of 1946 (8,929).

The total number of births for 1948 includes 889 (1,026 in 1947) cases not resident in the city, giving a figure of 7,596 babies born in Bristol of Bristol residents (9,056 in 1947). To this figure must be added the number of Bristol babies born outside the city boundary, viz., 235, to amount to the Registrar-General's corrected figure of total Bristol live births—7,831. (1947—9,142, 1946—8,041, 1945—7,027, 1944—7,767).

Illegitimacy (Rate: 55 per 1,000 live births).

The number of illegitimate births registered in 1948 was 465, equal to 5.5% of the total live births (521 equal to 5% in 1947). The number and proportion of non-residents is also somewhat similar to the previous year—75 being 16% (82—16% in 1947).

The corrected figures (inward and outward transfers—R.G.) for 1948 were 429, compared with 473 in 1947.

Stillbirths (175) (Rate: 21.8 per 1,000 total births).

The stillbirth rate for 1948 (21.8 per 1,000 total births) slightly better than the low level record of the previous year (22.3). There were 215 (263 in 1947) registered. Of these 43 (57 in 1947) were outside-city cases. As in 1947, there were three stillbirths transferable to Bristol from outside the city boundary.

Deaths (Rate: 10.52 per 1,000 population).

The total number of civilian deaths recorded in the city in 1948 was 4,975, being 646 less than the previous year's total of 5,621. Deaths of non-Bristol residents included in these figures number for 1948 and 1947 respectively, 548 and 576. The net figure of Bristol deaths for 1948 is 4,576 compared with 5,114 in 1947, and gives the lowest death rate ever recorded in the city (10.52 per 1,000 population), (1944—4,457 deaths, rate 10.99, 1935—4,505, rate 10.92).

Natural Increase (Rate: 7.48 per 1,000 population).

The natural increase in the population of Bristol, that is, the excess of births over deaths during the year, was 3,255.

Infant Mortality (192) (Rate: 25 per 1,000 live births).

During 1948, in Bristol, 243 infants (including 54 non-Bristol) died within one year of birth. After adjustment the Registrar-General's figure is 192 (267 in 1947). The low record rate of 29 for 1947 has now been considerably improved upon by the rate of 25 per 1,000 live births for 1948. (37 for 1946, and the previous best rate of 35 for 1945).

Infant mortality rates per 1,000 live legitimate and illegitimate births were, respectively, 24 and 33.

Neo-Natal Deaths (119) (Rate: 15.20 per 1,000 live births).

The Registrar-General's figures for this age group are not available, but local figures indicate that the number of babies dying in Bristol during the first month of life was 152 (188 in 1947). After adjustment for residence at time of death, this age group represents 62% of the number of deaths of infants under one year of age (60% in 1947).

Of the total neo-natal deaths, 54 (36% approx.) occurred on the first day of life and from one day to within the first week, 59 (39% approx.). The net figures for 1948 and 1947 respectively were 119 and 160.

Maternal Mortality (6) (Rate: 0.74 per 1,000 total births).

There were ten maternal deaths in the city during 1948. Of these five were Bristol residents, to which one other case of a Bristol resident dying outside the city must be added, to make a total of six Bristol deaths, compared with a net total of eleven for 1947.

This is the lowest number of cases ever recorded in Bristol, and the resulting maternal mortality rate of 0.74 per 1,000 total births, is a considerable improvement on the low record rate established for Bristol last year (1.17). An analysis of the maternal causes of death will be found in Table 9 of the Vital Statistics, page 135.

GENERAL PROVISIONS OF THE HEALTH SERVICES.

Department of Preventive Medicine (statistics pages 136-138).

Dr. K. E. Cooper has contributed a report on the work of the Preventive Medicine Laboratories. See Appendix II, page 47.

Mr. E. G. Whittle, Public Analyst, gives a report on the work of his department in Appendix V, page 69.

HOSPITALS.

On July 5th the municipal hospitals were transferred to the Regional Hospital Board.

Southmead Hospital (statistics page 150).

No report available.

Mortimer House Maternity Hospital (statistics page 150).

No report available.

Frenchay Park Hospital (statistics page 150).

Dr. W. L. Broadfoot, Medical Superintendent, reports as follows:—

The ante-natal and infant welfare clinics established in January, 1947, have gone on expanding, and are capably fulfilling the needs of the surrounding population.

The nursery unit has been enlarged by the opening of one additional ward.

The second intensive course for ex-service nursing orderlies began in June, 1948. The final examination will take place in June, 1949.

The hospital as a whole continues to expand, and it is hoped to accommodate the S.W. Regional Plastic Unit in the near future.

Frenchay Park Sanatorium (statistics page 150).

No report available.

Ham Green Hospital and Sanatorium and Charterhouse Hospital (statistics page 150).

Dr. James McGrae, medical superintendent, reports as follows:—

Total admissions of infectious diseases amounting to 1,428 cases seem to indicate a drop in the incidence of infectious diseases, but the statistical significance of this is considerably influenced by the fact that we have been able, during the year, to keep only approximately 120 beds open for these diseases.

A potential waiting list for infectious cases is believed to be relatively high, particularly in the case of diseases like pneumonia, which have had to be refused to a very large extent. This unhappy expedient has been due entirely to lack of nursing staff, a problem which still continues.

Scarlet Fever.

Admissions amounted to 379 cases, all of which recovered.

Diphtheria.

Thirty-three cases were proved, the majority were mild, and many of them were bacteriological cases. The drop in the incidence of diphtheria, which has been evident during the past three years, has been continued, and this is the lowest figure so far achieved in this hospital. There were no deaths, and only one patient could have been considered seriously ill from the disease.

Whooping Cough.

One hundred and fifty-seven cases were admitted, of which six died. Many of these cases were severely ill, particularly small infants, and this disease still remains a problem, which puts it in the class of the more serious infectious diseases of the present time.

Measles.

Measles has occurred during the year 1948, in two peaks, one during the summer and one in the winter time. Neither of them showed a severe type of disease, and 104 cases were taken care of in this hospital and included no deaths. This is, unfortunately, one of the diseases with which it has not been possible to cope

adequately, since we had to refuse a large number of cases owing to lack of nursing staff. Measles, like whooping cough, may be regarded as a serious disease, unless taken care of adequately.

Erysipelas.

Continues to be mild, and we took care of 28 cases, with no deaths.

Pneumonia.

Eighty-one cases of pneumonia were treated with seven deaths and, as mentioned above, many more of these cases could have been admitted had we the staff to look after them.

Puerperal Fever.

The 23 cases admitted were generally mild, none showed evidence of septicæmic infection, and there were no deaths. Babies admitted with their mothers did well, and in no case was breast feeding discontinued. In several cases, although breast feeding had been discontinued before admission, it was re-introduced in hospital entirely successfully.

Mumps.

Produced 22 cases, among which an interesting series of 11 cases proved to have mumps meningoencephalitis. This group of 11 cases is extremely exceptional, since this complication is relatively rare. All the cases did well, and there was no residual damage.

Cerebro Spinal Fever.

Although 69 cases were notified as suffering from cerebro spinal fever, only five proved to be true cases. The extremely low incidence of meningococcal infections during the year is noteworthy. All five cases recovered completely.

Anterior poliomyelitis.

On the other hand, this disease showed an incidence of 29 cases, many of whom were severely ill, and four died. Seven required treatment in a mechanical respirator. In effect, anterior poliomyelitis this year was more severe than during 1947 when the major epidemic occurred in Great Britain.

Gastro Enteritis.

Infants with this disease continued to be treated in this hospital, and we took care of 61 cases, with one death. This mortality is exceedingly low compared with that obtained in other parts of the country. None of these cases were breast-fed babies, and practically a third of them required intravenous fluids on admission. In this connection it cannot be over emphasised how important it is that breast-feeding should not be discontinued, since our experience in handling gastro enteritis cases shows not only that breast-feeding seems to eliminate the disease in a prophylactic sense, but also breast milk, if available, is the most important single factor in the treatment of the disease.

We are grateful to report that in the latter part of 1948 we were receiving assured supplies of breast milk from the Breast Milk Bank now established at City Lodge Hospital, Cardiff.

Sanatorium.

The total number of admissions to Ham Green was 173, and the number of discharges was 172, of whom 33 died, and there remained in the sanatorium at the end of 1948, 159 patients.

Surgical work continues to be done in the sanatorium on a scale adjusted to the time available to the chest surgical unit which is, of course, not able to give us as much time as we would like, since that unit has so many other commitments.

Charterhouse Hospital.

Sixty-six cases were admitted to this annexe and 66 discharged, 34 remaining at the end of the year.

All the cases dealt with at Charterhouse Hospital are female, and the disposal of patients at this Hospital solves a number of administrative problems connected with the control of adult males and females who are in the convalescent stage of the disease.

General Remarks.

The biggest problem this hospital has had to deal with during the year has been to maintain adequate nursing and domestic staffs, and it is a problem which still does not show any real sign of improvement.

During the latter part of the year our staff has certainly been relatively static without any improvement or retrograde movement.

There is not only the matter of total number of staff to be resolved, but the actual quality of the staff we work with, which is very much below par. This latter is a point which is not usually emphasised, but is of tremendous importance in practice.

During the year it has been necessary to refuse many cases, particularly on the fever side of the hospital, due purely to lack of nursing staff. This is a distressing situation.

Domestic staff has been maintained with the help of workers from the Continent of Europe. Some of these have proved very useful, but all suffer under the disadvantage of inadequate English.

The same remarks apply to Charterhouse Hospital, where 50 beds are just barely being maintained.

This problem of inadequate staff presents itself on every side—it limits the use of the hospital at present, and it contra-indicates all extension problems which may be decided on; it limits the actual amount of nursing work done, and indeed certain nursing practices, particularly those of the comforting type prevalent before the war, cannot be practised now at all.

Fortunately there have been no epidemics; if there had been, the Hospital simply could not have coped with the work unless some extraordinary measures were put into effect to increase the staff, and I would view with concern any possible sudden expansion of fever hospital staffs with people not trained in this specialised work.

Snowdon Road Hospital (statistics page 150).

Eastville Institution.

Stapleton Institution.

A brief report on the above is included in Appendix VIII, "Welfare Services," page 123, by Dr. R. C. Wofinden.

Radiological Services (statistics page 148).

No report available.

Welfare of the Blind.

This is referred to in a report on the "Welfare Services," by Dr. R. C. Wofinden. See Appendix VIII, page 123.

Health Education.

The work of public enlightenment, which necessarily permeates every section of the health department, has been brisk during the year.

Numerous requests for information about the changed arrangements under the new Health Service Act have been received and dealt with as fully as possible. Many of the enquiries were on specific matters, being dealt with as such, whereas others necessitated personal contact and much time spent in lectures, demonstrations and "quiz" sessions.

The rapid development of events compelled the various heads of sections to request the publication, in a compact form, of information on the various services for their day-to-day use. This was done in the shape of loose-leaf notes, which were so much appreciated that an enlarged and up-to-date edition is now in preparation for issue in 1949.

To some extent this method of enlightenment helped the general public to receive more accurate and detailed information than had hitherto been possible, but preliminary discussions soon showed that, as soon as some signs of stabilisation appeared in the new health service layout, it would be essential to publish a handbook on all the health services generally available throughout the city. Already the initial steps have been taken, and it is hoped to produce the handbook in the very near future. There will then be at the disposal of all, a simply-worded yet comprehensive guide to all the local medical benefits made available by the coming into being of the National Health Service.

Use is still made of the excellent facilities provided for public instruction by the Central Office of Information in the form of films, apparatus and operator free of charge.

Requests for the supply of posters, leaflets and pamphlets, although not met entirely out of local resources, have always been satisfactorily dealt with, as the Central Council for Health Education has a most excellent selection from which to choose.

From the professional point of view, there have been arranged many conducted tours of the health services, in which doctors, students and nurses have participated. In addition our relationships with professional visitors from overseas have been strengthened. A very great amount of work has been done in demonstrating the services to them and tributes of warm appreciation have been received.

Office Accommodation.

The adaptation of premises in Marybush Lane, at the rear of the Central Health Clinic, is in the hands of the contractors, and it is hoped that the administrative staff from Kenwith Lodge will move into the new offices towards the end of 1949.

Shops Acts and Young Persons (Employment) Act (statistics page 158).

Mr. C. L. Bryant, chief shops inspector, reports as follows:—

The present Shops Acts number seven, and for convenience may be divided into two sections:—

1. Those sections dealing with the closing of shops on the weekly half-holiday, in the evenings, and on Sundays.
2. Those sections dealing with the conditions of employment of shop assistants and young persons, *i.e.*, weekly half-holiday, meal and rest intervals, night employment and weekly hours of employment of young persons under 18 years of age, seating for female assistants, and compensatory holiday for Sunday employment.

Section 10 of the Shops Act, 1934, which deals with Sanitation, heating, lighting, ventilation, etc., is dealt with by the Chief Sanitary Inspector (see page 33).

Under this Section, 311 cases of unsatisfactory conditions were referred to the Chief Sanitary Inspector.

The Young Persons (Employment) Act, 1938, provides for the control of the working hours, meal and rest intervals, night employment and Sunday employment of young persons under 18 years of age employed in certain occupations outside the scope of the Shops or Factory Act.

Routine Inspections.

During the year, 6,539 visits and 1,160 revisits were made under the Shops Acts, and 62 visits and two revisits under the Young Persons (Employment) Act.

With the authority of the Licensing Justices, regular visits have been made to cinemas, etc., to inspect the records of Sunday employment and holidays required to be kept under the Sunday Entertainments Act. These inspections have been made in conjunction with inspections at cinemas under the Shops and Young Persons (Employment) Act.

Legal Proceedings.

It has not been found necessary to institute legal proceedings under the Acts during 1948.

Evening and Sunday Duty.

Evening and Sunday duty has been carried out as required, but less time has been devoted to this side of the work, due to the earlier closing of shops in general.

The war time regulation fixing earlier closing of shops during the winter months has remained in force.

This Regulation fixes a general closing hour of 7.30 p.m. on the late day (Saturday) and 6 p.m. other days, and operates from November to February inclusive.

The Regulation empowers a local authority to vary these closing hours, but no request for variation from any body of traders or assistants was received and no variation of the closing hour has been made by the local authority.

Sanitation, Housing and Inspection of Food (statistics page 152).

The report of the chief sanitary inspector, Mr. F. J. Redstone, is contained in Appendix I, page 33.

Port Health.

The report of Dr. D. T. Richards, chief assistant port medical officer, is included in Appendix IV, page 58.

Mental Health.

A report by Dr. J. Hutton, senior assistant medical officer of health, on the work of the Mental Health Section, will be found in Appendix III, page 52.

MATERNITY AND CHILD WELFARE.

Dr. A. I. Ross, chief assistant medical officer for maternity and child welfare, reports as follows:—

General (statistics page 139).

The operation of the National Health Service Act has not produced any great changes in the maternity and child welfare services in spite of patients now being able to obtain free advice from their own general practitioners. The total attendances at clinics have not dropped, although births were down by 1,532 compared with the year before. Due to the decreased birth rate attendances of new patients have decreased slightly.

Ante-Natal Clinics.

The total attendances of new patients at ante-natal clinics were 5,406—only 534 less than 1947. Two centres were opened—Water Lane, Brislington, and Rochester Road, St. Anne's, and the two sessions previously held at Wick Road were transferred—one to each centre. On 31st December there were thirteen centres with thirty weekly sessions.

The percentage of babies born in institutions to Bristol residents was 69% of the total births. Since the 5th July, when hospital treatment became free, there has been an increased demand for confinement in hospital. This is understandable, as from the patient's point of view, home confinement is more troublesome and costly.

The city continues to be allotted a fixed number of maternity bookings for Southmead and Mortimer House Maternity Hospitals for each month. A patient can be booked for hospital only for medical reasons, or if her home is unsuitable for delivery.

Post-Natal Clinics.

There was a very slight increase in new patients (37). The new attendances equalled 45% of new ante-natal patients, and was an increase of 5% over 1947. The number of centres and weekly sessions remained unchanged.

Special Diagnostic Clinic.

This clinic continues to be most useful. During the year 418 new patients attended.

Infant Welfare Centres.

There was an increase in attendances of 4,641 over 1947, despite a drop of 525 in the number of new patients. The average attendance at sessions was 25.5.

The percentage of children under one year who attended clinics rose from 79% of those born in the city in 1947 to 90% in 1948, an exceptionally large figure.

The attendance of children over one year remains unsatisfactory. Too few of these children are receiving routine medical examinations.

During the year additional centres were opened at:—

- (a) The Congregational Church, Avonmouth.
- (b) The Church Hall, Water Lane, Brislington.
- (c) The Medical Mission, Redcross Street.

Negotiations were commenced for centres in the Fishponds, Hengrove and Southmead/Henbury areas. The areas where new centres are particularly necessary, but where the Committee have been unable to obtain premises, are the Inns Court Estate and Ashton Vale.

On the 31st December, 1948, there were twenty-seven infant welfare centres in the city, at which $61\frac{1}{2}$ weekly sessions were held.

Close liaison and co-operation continued with Professor Neale of the University department of child health. Two of the assistant medical officers of health attend the Children's Hospital one session each weekly, and two of the doctors at the Children's Hospital take infant welfare clinics. Professor Neale's department staffs the Clifton infant welfare clinic.

Pairs of medical students attend six of our clinics weekly.

Voluntary Workers.

Voluntary workers continue to do extremely valuable work at clinics. At the end of the year they formed the Bristol Infant Welfare Voluntary Association (Clinics). The objects of the Association are:—

- (1) To bring together voluntary workers at clinics.
- (2) To increase the number of voluntary workers.
- (3) To disseminate knowledge of infant welfare matters.

It is felt that the Association will be most useful in helping these workers, maintaining their interest, and in the recruitment of new voluntary workers.

When the full time doctor who took the ante-natal, post-natal, and infant welfare clinics at Bristol South Clinic went on sick leave, five of the general practitioners in that district temporarily undertook on a sessional basis the work he had been doing there. This has worked smoothly, and has been most helpful in bringing together the workers in preventive and curative medicine in that area. The practitioners have enjoyed the work. It is a beginning in a small way of the health centre envisaged in the National Health Service Act, 1946.

Care of Children apart from their Parents.

On July 5th, the responsibility for foster children under the Public Health Act, 1936, the adoption of children, and children in residential nurseries, passed under the authority of the Children Act, 1946, to the children's committee. Most of the strictly medical side of the work continues to be done by the doctors of the maternity and child welfare department, and full co-operation has been maintained.

Premature Babies.

There were 564 premature births notified during the year, a decrease of 180 on the previous year.

Nine of our midwives have now attended a three week period of resident instruction at Southmead Hospital, during which emphasis is placed on the care of premature babies. It is hoped early in the year to start a scheme for the domiciliary care of premature babies by specially trained staff using special equipment.

The following table compares the deaths of premature babies in 1948—1947. A full analysis by weights is given in Appendix IX, page 134.

	1948		1947	
	At home	At institutions	At home	At institutions
Number of premature births	116	448	190	476
Number of deaths under one month	13	60	13	64
Percentage	11.2	13.4	6.8	13.4

Day Nurseries.

There is no change to report in either the number of nurseries (thirteen) or the accommodation available (520 places), the health committee being responsible for:—

<i>Nursery</i>	<i>No. of places</i>
91 Ashley Road	50
Avonmouth	50
141 Coronation Road	45
12 Dowry Square	30
Granby House	45
Knowle Park	50
Monks Park Avenue	50
17 Oakfield Road	35
16 The Paragon	25
Roxburgh	40
23/25 Southmead Road	40
264 Wells Road	30
81 Whitehall Road	30
	<hr/> 520 <hr/>

Five hundred and twenty-eight children have been admitted.

Public health or hardship grounds under which children are admitted include:—

- (a) A mother separated from her husband.
- (b) A mother's illness or confinement.
- (c) Illness in the family.
- (d) Bad housing conditions where there are large families.
- (e) Medical reasons.

Even with this change of nursery population the waiting list has doubled since my last report. The waiting list is now 73% of the places available, the number in the under two years age group exceeding the 2—5 year age group by 6%. It will be seen, therefore, that there is still a demand for day nurseries.

Attendances throughout the year averaged 87% of the places available. The main reasons for absence are shown in the following table: respiratory diseases were responsible for a strikingly large amount of absence.

Reason for absence	Child weeks per 1,000	
	—2	2—5
Whooping Cough	25.2	17.5
Measles	26.9	13.0
Bronchitis, Colds	56.8	37.0
Tonsillitis	0.9	1.9
Pneumonia	1.7	1.3
Croup	0.1	—
	<hr/>	<hr/>
Respiratory diseases	111.6	70.7
Earache, or discharging ear	1.9	1.7
Enteritis	4.2	1.3
Impetigo	3.2	3.6
Scabies	0.5	0.2
Ulcerated mouth	0.4	0.4
Scarlet Fever	0.2	1.8
Chicken Pox	6.8	14.8
Mother ill	6.2	8.9
Infection contact	5.0	5.1
School holidays	8.0	19.3
Holidays	8.2	9.7
Other reasons	28.8	27.7
	<hr/> 185.0 <hr/>	<hr/> 165.2 <hr/>

During the year 482 children have been discharged, the reasons being:—

Mother ceased to work	187
Removed to another district or out of Bristol ...	83
Reached the age of 5 years	74
Mother recovered from illness	34
Transferred to Nursery Schools	34
Neighbour or relative to care for child	28
Poor attendance	13
Other reasons	29
	<hr/>
	482
	<hr/>

It was agreed during the year to raise the nursery fee from 1/- to 1/6 per day to cover the cost of meals. This increase came into operation on January 1st, 1949.

With the exception of the Paragon and Wells Road Day Nurseries, where because of the structure of the houses, conditions are not ideal, all nurseries have been recognised by the Ministry of Health for the training of students for the National Nursery Certificate.

Improvements have been made in sanitary arrangements, in the provision of hard surface playing areas, and in educational and recreational equipment. Decorations have been carried out where absolutely essential, and improved arrangements have been made for the repair of toys.

During the past year, staff has been adequately maintained on the ratio of one to every five children. Absence due to sickness, or for any other reason, has not been abnormal.

Out of the thirteen nurseries, eleven have a state registered nurse in charge. The other two have state enrolled assistant nurses, of long experience in work with children. During the year only one state registered nurse has left, and another one has replaced her.

In the thirteen day nurseries there are thirty-one trained nursery nurses. Of these, ten are deputy sisters, and seven of these ten have been trained and up-graded with the department. Of the remaining twenty-one, sixteen have been trained and up-graded to nursery nurses within the department.

Nursery assistants are either students in training for their nursery nurses certificate, or unqualified staff with varying degrees of experience with children.

During the year, fifteen students have been in training under the health committee, four of whom have successfully completed training. Three students left during training, and the remaining eight are still in training.

Forty-three students under the education committee have been transferred to day nurseries, for periods of three months in order to gain experience with children under two years of age.

Nursing Homes.

One new registration was effected during the year and two nursing homes closed down.

Changes in accommodation were made in several homes, including the Hampstead Maternity Home, where midwifery work was discontinued.

The total nursing homes registered at the end of the year numbered 21, with accommodation for 82 maternity and 313 other patients.

The operation of the National Health Service Act, 1946, on the 5th July, 1948, meant that the Walker Dunbar Hospital and the Bristol Maternity Hospital, which were registered as nursing homes, and seven institutions in the city previously exempted from registration, no longer came into the provisions of the Public Health Act, 1936.

Several visits were paid to homes for elderly people. Supervision and improvement of these homes is very difficult at present, because until the National Assistance Act, 1948, is implemented, they are not subject to registration with the local health authority.

Nurseries and Child Minders Regulation Act, 1948.

During the year the Act became operative. It requires local health authorities to keep registers of, and empowers them to supervise:—

- (a) premises in their area, other than premises wholly or mainly used as private dwellings, where children are received to be looked after for the day or a substantial part thereof, or for any longer period not exceeding six days: and
- (b) persons in their area who for *reward* receive into their homes children under the age of five to be looked after for the day or a substantial part thereof or for any longer period not exceeding six days.

It is an offence for an unregistered daily minder to receive into her home three or more children, of whom she is not a relative, from more than one household.

No applications to register premises were received.

It is likely that the Act will apply to certain kindergarten schools which do not take children of compulsory school age.

Male Sterility Clinic.

Dr. Irving-Bell reports:—

During 1948, there was an increase in the number of new cases seen—139 (101 in 1947) and also in the total attendances—326 (245 in 1947).

The most notable feature was the increase in the proportion of cases referred by the Marriage Guidance Centre as shown in the following analysis:—

(Figures in brackets are percentages for 1947)

Referred by M.O.'s of female sterility and other clinics	=	32%	(39)
„ „ general practitioners	=	32%	(38)
„ „ marriage guidance centre	=	27%	(14)
„ „ self (patient's own request)	=	5%	(7)
„ „ probation officers (courts)	=	5%	(0)

The number of men tested and found to be sterile or infertile was 44% approximately; at least two separate semen analyses are made on each patient before a diagnosis of infertility is made.

The number of men seen at the clinic for examination and advice for conditions other than infertility was 27%, as against 19% in 1947; these were cases of impotence, disorders of sexual function, and for premarital examination. These examinations before marriage are considered to be a very important section of the work at the central clinic, not only as a means of correcting certain physical disabilities in both partners, but of using some of the time during the interview to teach the future husband the essentials of marital intercourse so that difficulties arising out of ignorance can be prevented and the prospect of a happy married life made more certain of achievement.

Female Sterility Clinic.

Dr. Boxall reports:—

The total number of attendances	286
New cases	74
Old cases	212

As in preceding years the clinic exists to investigate infertility, both absolute and relative, in the female and to endeavour to bring about a pregnancy in these cases.

During the past year, an increasing number of women have come, or in some cases have been sent by the marriage guidance council, because of difficulties in marital adjustment and the physical aspects of sex. Some of the problems could have been recognised and avoided by pre-marital talks and examinations, for which there appears to be considerable need.

The scope of the clinic is still limited by lack of time and equipment to undertake special investigation so that patients still have to be referred to the hospital. As before the husbands have been sent to Dr. Irving-Bell.

The number of pregnancies reported was 20, an increase of five over last year's number, but this may not represent the correct total, as some patients do not report a pregnancy, or may continue to attend at the hospital and neglect to come back.

About 20% of cases were referred by general practitioners, many of whom are unaware that the clinic exists; and those who do, continue to send patients. Of the remainder, an equal number heard of the clinic through members of the health service as those who came on recommendation of former patients.

Many women expressed appreciation of the confidential nature of the interview and treatment, contrasting it with the necessarily public atmosphere of the out-patients' departments. This confidential approach to the problems presented is essential to the proper function of such a clinic.

Babies' Home, Downend.

Dr. Greta Hartley, who is responsible for the medical supervision of the residential nursery at the Crescent, Downend, reports as follows:—

During the year 1948, the administration of the babies' home passed in July from the health to the new children's committee, and some difference in policy of these departments resulted in fewer admissions than in previous years.

The training scheme for nurses has again given rise to trouble throughout the year, absence of nurses at lectures causing difficulty in the proper care of children and causing resignations of the senior staff owing to the resultant extra strain thrown on them.

January—July.

During this period there were 64 admissions, including a considerable number of "short-stay" cases.

The health of the children during this period was good, and no case of serious illness occurred.

Eighteen children had chicken pox; one had whooping cough, and one had scarlet fever.

July—December.

Admissions during this period were only thirty-four, owing to the severe curtailment of "short-stay" cases, only extremely urgent cases being admitted.

Discharges were also increased, a number of children being placed in foster homes and a few were adopted.

In spite, however, of the reduced pressure on accommodation, though in general a satisfactory standard of health was maintained, there was more illness this time attributed to (1) changes of nursing staff; (2) relaxation of certain principles, previously adopted to limit infections, in order to give the children a wider social life.

The cases of illness included six children transferred to general hospitals, one with appendicitis, one cervical abscess, one pneumonia, and two for investigation—all these children made good recoveries. One severely mentally defective baby developed convulsions and died in hospital.

Sixteen children had measles; five whooping cough (two transferred to Ham Green hospital); two with gastro-enteritis, treated at Ham Green hospital. All these children made good recoveries.

Frenchay and Nore House Residential Nurseries.

Dr. Alison Craig, who is responsible for the medical supervision of the above nurseries, reports as follows:—

During 1948, Frenchay House was available for the reception of children from 2—5 years, and Ward 32 at Frenchay Park Hospital for the 0—2 year-olds. Children who were likely to be in for some time were transferred to Ward 14 at Frenchay Park Hospital or to Nore House, Portishead. On July 5th these nurseries were transferred from the care of the health committee to the children's committee.

In all there were 242 new admissions, and 215 children were discharged back to their own homes, to foster homes, or to adopting parents.

Small, mild epidemics of whooping cough, chicken pox and mumps occurred during this year requiring the closure of the nurseries for the necessary quarantine period. One child with influenzal meningitis and two with broncho-pneumonia were sent to Ham Green Hospital and made good recoveries. One mentally defective child was sent to Hortham Colony and one congenitally blind child to a Sunshine House. Where necessary, children were sent to special departments at the central health clinic, *e.g.*, ear, nose and throat, tuberculosis, orthopaedic and dental, for a further opinion.

Apart from these conditions, and the inevitable minor disorders which occur among a group of children, the general health in the nurseries has been good, many children showing very marked improvement in weight, general nutrition, behaviour and habits, even after a short period of residential care. When necessary a report has been sent to the health visitor for 'follow up' where the child has been sent home.

Immunisation against diphtheria and whooping cough has been carried out only with the permission of the parent, but in no case has this been refused.

The provision of nursery school activities in Frenchay, Ward 14, and Nore House, has been of very great value to the children.

Unmarried Mothers' Welfare.

The welfare officer, Mrs. Stott, reports as follows:—

During the year, 353 applications were received. Of these;

- 17 were girls under 17 years of age.
- 116 were between 17 years and 21 years of age.
- 63 were women over 30 years of age.

This last group particularly is identified with the present housing problem.

- 281 cases were in respect of a first illegitimate child.
- 54 cases were in respect of a second illegitimate child.

In seven cases the mother was living with the putative father.

The 11 cases remaining can only be described as very unsatisfactory.

It is encouraging to note that with few exceptions the unmarried expectant mother regularly attends the ante-natal clinic, and shows ready co-operation in plans suggested for her welfare.

At the end of 1947 there were 91 cases outstanding where the child had not been born, making a total of 444 cases to be dealt with during the year 1948. Arrangements were made as follows:—

Admitted to hospital for confinement	269
Admitted to hospital immediately after birth of child	7
Born at Mother & Baby Home	17
Home confinement	22
Assistance in confinement not sought	37
Application withdrawn	17
Child not yet born (on 31/12/48)	75
	<hr/>
	444

One hundred and nineteen girls were admitted to homes during the year. In many instances, this was because the mother refused to be parted from her baby, and her home was closed to her if she kept her child. The average stay in a home is about six weeks before confinement, and 11 weeks afterwards, with baby.

Sometimes the suggestion is made that too much is done for the unmarried mother and her child. It is hoped that one answer is found in the greatly reduced illegitimate infant mortality rate which now compares very favourably with the legitimate infant mortality rate. It must be remembered too, that many are young girls who are the potential mothers of the next generation, and no effort should be spared to improve their physical and moral health, and to inculcate the ideals of motherhood and family life.

It is gratifying to note that a large number of girls ultimately return to their homes with the baby. Often this is brought about by the visits of the girl's parents to the Mother and Baby Home, when baby makes its own appeal.

The need of a hostel for mothers and babies is still a pressing one. Some such assistance is a necessity for those mothers who have no homes, or unsatisfactory homes. Many of them are young, and in consequence have a low earning capacity, making it impossible for them to provide adequately for baby and keep themselves respectably. Too often the struggle to do so leads to frequent changes of employment and of lodgings, so bad for mother and child; and for the mother a growing sense of burden, which not infrequently ends in further mistakes. Although a good percentage of the unmarried mothers ask for adoptions to be arranged, there are a number who are anxious to keep the child, and for these, even if there were sufficient residential nursery beds available, this would not solve the problem.

At the end of 1947 there were 338 cases where affiliation work was incomplete, to which were added 353 applications received during the year, making a total of 691.

The following is an analysis of the work done:—

Affiliation Orders obtained	...	...	...	...	...	42
Order enforced	...	...	...	...	...	1
Agreements	...	...	...	...	...	74
Information laid	...	...	...	...	...	10
Payments direct to girl	...	...	...	...	...	2
Child adopted	...	...	...	...	...	49
Married to putative father	...	...	...	...	...	29
Co-habiting	...	...	...	...	...	46
Married to another man	...	...	...	...	...	9
Putative father not traced	...	...	...	...	...	6
Putative father not known	...	...	...	...	...	7
Putative father left country	...	...	...	...	...	2

No action possible—

(1) Married woman, not entitled to summons	...	...	...	...	...	7
(2) Applicant's whereabouts not known	...	...	...	...	...	2
(3) Stillbirth, abortion or child died	...	...	...	...	...	22
(4) Girl certified mental defective	...	...	...	...	...	3
Girl refused to take action	...	...	...	...	...	9
No corroboration	...	...	...	...	...	37
Left area	...	...	...	...	...	17
Girl died	...	...	...	...	...	2
Applications withdrawn	...	...	...	...	...	8
Woman returned to live with husband	...	...	...	...	...	1
Girl in hospital—unable to take action	...	...	...	...	...	1
Incomplete	...	...	...	...	...	305

691

Help was given in 229 cases of arrears and applications for an increased payment under a Court Order.

The assistance in receiving and disbursing payments continues to prove of real value. The sum of £11,015 9s. 6d. was dealt with as follows:—

£9,780 12s. 5d. ... received and paid to or on behalf of the individual concerned.

£851 11s. 5d. ... repaid towards Health and Nursery Services.

£383 5s. 8d. ... repaid to Social Welfare Committee and National Assistance Board.

£11,015 9s. 6d.

Sixty-four matrimonial cases were referred to the health department during the year. The housing situation is a strong factor in many of these cases. The problems involved included desertion, cruelty, adultery, and neglect to maintain. The first consideration is always the possibility of adjustment of the difficulties which have caused the breakdown, and ultimate reconciliation. This is often a long process, and frequently means a number of interviews. Where no other course seems possible, help is given in the application to Court for an Order. Many are referred to the health department after an Order has been obtained at the Court. The following shows the result of the work done:—

- 7 Orders obtained.
- 14 Payment under Order enforced.
- 19 Reconciled.
- 10 Still living in unsatisfactory circumstances.
- 4 Referred to probation office.
- 4 Husband not traced.
- 2 Left area.
- 4 Incomplete.

Dental Services.

Mr. W. H. B. Stride, senior dentist, reports as follows:—

Dental examination and treatment was carried out for expectant and nursing mothers and young children at the five main health centres during the year. In addition, owing to an offer from a dental surgeon of whole time work for a short time, it was possible to carry out some examinations and treatment at Verrier Road Clinic during December.

The number of sessions devoted to maternity and child welfare work during the year was estimated at 465. As most of the sessions are mixed sessions, including also school children, this estimate is probably less than the actual time given to this side of the work.

On the introduction of the National Health Service Act, on 5th July, 1948, it became the statutory duty of the local health authority to provide a priority dental service for expectant and nursing mothers and children under the age of five years not attending schools maintained by the local education authority. For many years the Authority's dental service in Bristol has been available for the treatment of expectant and nursing mothers and children under five, and all patients attending the ante-natal and post-natal clinics and also children under school age, are offered dental examination and advice. Those who are willing are given appointments for examination and treatment. In addition to this routine procedure, emergency treatment is available at all times. We have been fortunate in Bristol in retaining all the dental staff, and it has been possible throughout the year, to provide full dental treatment, without delay, to all maternity and child welfare cases requiring it.

The treatment given at the health centres is complete except for the provision of dentures; where these are required patients can attend a dentist of their choice under the arrangements of the National Health Service.

In view of the inadequacy of the present staff of ten full-time officers to deal effectually with the treatment of 52,561 school children and 26,000 children under five, in addition to approximately 6,000 mothers, it is not thought justifiable at present to take the time of the dental officers in lectures to mothers, but for the moment propaganda will continue to be carried out by the medical and nursing staff and by the health visitors.

The McKesson anæsthetic apparatus is found to be of great value in the treatment of mothers, as the addition of trilene makes all the difference in those cases which are not very satisfactory under continuous nitrous oxide and oxygen.

Vinesthene is used for the younger children.

In addition to the complete tables of treatment, the following are of interest, showing the numbers of mothers attending up to June, and after the Appointed Day.

Table showing the number of mothers attending.

	JANUARY—JUNE		JULY—DECEMBER	
	Expectant Mothers	Nursing Mothers	Expectant Mothers	Nursing Mothers
Inspections	645	70	763	54
Requiring treatment	635	69	746	51
Treated	481	89	477	54

Increasing interest is taken by the parents in seeking examination and treatment for the younger children. Many are seen when they accompany the older children, and everything possible is done to encourage this.

Statistics of cases and attendances of mothers and young children during the year are as follows:—

1947		1948
1,499	Expectant mothers—new cases	1,408
3,627	„ „ —attendances	3,547
127	Nursing mothers—new cases	124
352	„ „ —attendances	420
1,075	Pre-school children—new cases	1,284
1,986	„ „ „ —attendances	2,545

EXTERNAL NURSING SERVICE.

Miss L. M. Bendall, matron, external nursing service, reports as follows:—
The staff of the external nursing service consists of:—

Matron
Deputy matron
Tutor
Assistant tutor
Inspector of midwives
Municipal midwives
Clinic sisters
Health visitors
School nurses
Clinic nurses
Physiotherapists
Dental attendants
Adult helpers
Clinic assistants
Inspector of day nurseries
Day nursery personnel
Home help organiser
Home helps.

Clinic Sisters.

These are senior health visitors, who are responsible for the day to day administration of the health centres to which they are attached. There has been one resignation, due to retirement during 1948, and another senior health visitor has been appointed in her place.

Health Visitors and School Nurses.

The scope of the health visitors' work has increased considerably during the past year, due to the opening up of new housing estates, clinics and schools, the carrying out of surveys and investigations, and the following up of hospital discharges. This is emphasized by the increase in the number of home visits paid, a total of 140,563 (13,525 more than the previous year).

One health visitor carries out full-time duties in connection with home visitation of infectious diseases. These duties include a primary visit on the notification of an infectious disease, and such follow-up visits as are found to be necessary.

There is an overall shortage of health visitors and the position with regard to staff is, and has been during the year, very fluid. Eleven full-time appointments and one part-time appointment have been made and there were fifteen resignations.

Causes of resignations were as follows:—

- 1 On reaching retirement.
- 1 On leaving the country.
- 6 To take up other posts.
- 5 Marriage.
- 1 Gave up nursing.
- 1 Ill health.

One health visitor was transferred to the children's department.

Obviously the only way to overcome the shortage of staff, which is manifest throughout the country, is to train more health visitors, and Bristol is already taking a leading part in this training. The health visitors training course is of six months duration, commencing in September and finishing in March. Twenty-two students completed their training in March, 1948. Of these, sixteen were Bristol students, and six Gloucester students. Twenty-one were successful in passing the examination at the first attempt, and the remaining one took it at a later date and successfully passed. The Bristol students are under contract to this department until March, 1949.

An improvement in the provision of adequate uniform is overdue. It is appreciated that there has been an acute shortage of material, and it is hoped that this will be overcome in the near future. This is particularly so, with regard to uniform coats. There are instances where staff have been waiting as long as ten months for coats.

Two health visitors attended a refresher course in London, under the auspices of the Royal College of Nursing.

Clinic Nurses.

The full establishment of clinic nurses has been maintained throughout the year. These are State registered nurses who do not possess the health visitors' certificate. They are found to be invaluable in relieving the health visitors of routine duties, for which their specialised training is not required. There is no promotion for clinic nurses, so special care is taken in their selection. Young trained nurses are not encouraged to take these posts and clinic nurses are mostly married women or women over the recognised age for the health visitors training.

Physiotherapists.

There are three physiotherapists employed at the central health clinic, and prior to 1948, two of these were engaged solely in orthopædic work, and one in sunlight. Early in 1948, however, a change was made in the organisation of their duties, and they now take an equal share of the work in the orthopædic and sunlight departments. This is found to be more satisfactory, particularly with regard to relief during sickness and holiday.

Dental Attendants.

A full establishment of dental attendants has been maintained during 1948, ten working with dentists and one engaged on orthodontics.

Adult Helpers.

A full establishment of adult helpers have been usefully employed in the treatment of scabies and verminous head conditions.

Clinic Assistants.

There is a steady flow of candidates for appointment as clinic assistants. These are girls between the ages of sixteen and eighteen years, who are desirous of taking up hospital training. They are employed in health centres, and usefully fill in the gap between leaving school and the age at which they are able to commence their hospital training. They work in the various departments of health centres, and also attend lectures. Those who are appointed at the age of sixteen years, take a pre-nursing course at St. George Grammar School. This course is recognised by the General Nursing Council, and the students are able to take Part I of their Preliminary State Examination before entering hospital.

Clinic assistants who are appointed at the age of sixteen and a half years or over attend lectures at our own teaching centre, given by the assistant tutor. These lectures include practical instruction in bed-making, bandaging, temperature taking, etc.

During 1948, twenty-seven clinic assistants were appointed, and there were twenty-two resignations. Out of this number:—

- 15 left—Hospital training.
- 1 left—Physiotherapy training.
- 1 left—Domestic science training.
- 1 left—Health grounds.
- 3 gave up Nursing.
- 1 left to take nursery nurses' course.

Home Helps (statistics page 151).

Miss P. Walton, home helps organiser, reports as follows:—

Since the passing of the National Health Service Act, the home help service has been placed on a national basis as one of the social services, and is meeting a vital need. Bristol has two branches under one authority.

- (a) The municipal service, which operates from the central health clinic, and for which a home help organiser was appointed in September, 1948.
- (b) The council of social service scheme, which also has an organiser.

These two services are co-ordinated by the home help organiser of the municipal scheme. Both organisers however, are fully conversant with the duties of each of the services, and therefore are interchangeable when necessary. Overlapping is prevented by complete co-operation and by a clear definition of the types of cases to be assisted by each branch of the service.

The majority of cases helped by the municipal service are those where confinement takes place at home, or a mother of young children is ill, and there is no relative or friend to care for the patient and her family. The service obviates the necessity for the removal of mothers and children to hospitals and residential nurseries or homes respectively, thus maintaining a complete family unit during the period of incapacity.

The council of social service provides home helps for the aged and chronic sick.

Both services are working to full capacity, and additional home helps will be required to meet the growing demand as the service becomes better known.

Home helps are carefully selected, and the social side of the work is particularly stressed.

Families in need of help are referred by doctors, matrons of maternity hospitals, midwives, almoners, health visitors, district nurses, etc., and an increasing number of enquiries are being received directly from the homes of the persons requiring help.

All applications are investigated by means of a domiciliary visit. This course is essential in order to decide on the priority need of a home help, and conversely, to reject applications where such help is not considered necessary. It is not surprising in view of the prevailing shortage of domestic help, to find that certain applicants have misunderstood the services. It will be seen therefore, that careful domiciliary visitation of applicants, forms the basis of a successful home help scheme, and prevents the misuse of public funds.

The service is used by all classes of the community, and an increasing number of appreciative letters are received from persons who have benefited thereby.

Municipal Midwives.

The supervisor of midwives, Miss Gearing, reports as follows:—

Midwives, on the whole, were not as busy in 1948, but because of post-graduate courses and sickness, the case-load per midwife was equal to Rushcliffe recommendations.

Although it was thought that under the National Health Service Act, 1946, general practitioners would undertake more domiciliary midwifery, the number of times midwives acted as maternity nurses, *i.e.*, under the personal supervision of a doctor, did not increase.

The number of cases in which gas and air was used increased considerably during the year, 30% of patients receiving analgesia. This figure is still much too small, and it is hoped that it will be raised next year. It has been found that the analgesia machines are best kept in the central health clinic, and sent out from there by car when required. They are serviced by the pharmacist on return. Only two midwives are now untrained in gas and air analgesia.

Two midwives were trained in the use of gas and air analgesia. Two midwives attended a summer school for midwives, held in Bristol, and one attended a post-graduate course arranged by the association for supervisors of midwives.

Nine midwives did three weeks' post-graduate training at Southmead hospital, which included obstetric and premature baby work.

There were seven resignations during the year, one for ill-health, one on reaching retirement age, one on marriage and four for other posts. Three new midwives were appointed.

Tutorial Section.

Miss W. G. Gibb, sister tutor, who is in charge of the tutorial section with accommodation at 36 Queen Square, reports as follows:—

The work of this department is steadily increasing, both in the student health visitors section and with regard to talks and demonstrations in clinics, owing to the increase in the number of sessions. The latter necessitates a considerable amount of time being spent in the planning and preparation of the talks to be given.

It is noted with regret, that the Ministry of Food Advice Centre is closing, as the demonstrations were always appreciated, owing to the informal approach of the demonstrators and the knowledge which was put over so well.

Student Health Visitors Section.

Twenty-three students completed the six months course of training from September, 1947, to March, 1948. Six of these were trained for Gloucestershire, and one for the City of Gloucester. Twenty-three presented themselves for the examination of the Royal Sanitary Institute held in Cardiff, and twenty were successful. Of the failures, two were Gloucestershire students, and one was a Bristol student. These however, re-sat and passed later.

Pre-Nursing Course—Clinic Assistants.

The number attending for lectures and demonstrations in nursing varies from 17—20 students per week, owing to the irregular length of stay of these students. It has been found, however, that the teaching given has proved to be most helpful to these candidates on entering the various hospitals for their general training.

Nursery Students.

Twenty-eight students sat for the examination of the National Nursery Board during the year. Six of these were from day nurseries (health department students) and all passed at the first attempt.

Twenty-two went up from nursery schools (Education Department students). Of these fourteen passed at the first attempt, three passed Part B of the examination, one passed Part A of the examination, and four failed—these were successful at a second attempt. There are one hundred and thirteen students in training at the present time. This number includes seven from Nazareth House Nursery, eight from day nurseries, and the remainder from the nursery schools and the Downend Residential Nurseries.

Lectures and Demonstrations at Clinics.

These have been continued throughout the year fairly successfully. The most appreciative audiences have been the mothers attending the ante-natal clinics. The reason may be due to freedom from distraction, owing to the absence of babies.

The appointment system, whilst being beneficial to the people attending clinics, has upset the lecture programme. The numbers present fluctuate so much that it has been difficult sometimes to promise an audience at all.

Health Education.

Requests for the teaching of mothercraft and hygiene, etc., to guilds and clubs, have been as popular as in previous years, and the visits of parties to see the work done at the Central Health Clinic have increased.

The work entailed has brought its reward, which has been shown by the appreciation of all with whom contact has been made.

PREVALENCE AND CONTROL OF INFECTIOUS AND OTHER DISEASES.

Diphtheria.

For the second time (also in 1947) since records have been kept, there has been no death from this disease during the year.

Following the slight lapse of 1947, when the incidence exceeded by eight the previous year's figure of 38, during the past year a new low level has been reached, with but 18 confirmed cases.

Diphtheria Immunisation.

Group	1948	1947	1946
0—5	8,032 { 6,790	6,230 { 5,137	7,840 { 4,941
5—16	{ 1,242	{ 1,093	{ 2,899
Booster dose	3,792	3,041	6,592

Scarlet Fever.

For the third year in succession no death has been recorded in Bristol from this cause, 1946 being the first such year since records have been kept.

Cases coming to our notice in 1948 (547) exceeded by 84 those of 1947 (463), 1946 (567). This still remains a relatively low figure of incidence for this disease.

Poliomyelitis (Infantile paralysis).

In common with the rest of the country, for the second year running, Bristol experienced comparatively high incidence of this disease in 1948, 29 cases having been reported and confirmed (25 in second half of year), 31 cases in 1947 (seven in 1946). The highest number previously recorded was 24 in 1938.

Six deaths in Bristol were attributed to this cause during 1948—one a Bristol resident, and five non-residents.

Erysipelas.

The low record number of cases (82) notified in 1946 was followed in 1947 by an increase to 144 cases, which same figure is recorded for 1948. This is to be considered as about average for preceding few years to 1946.

Malaria.

Thirteen cases were notified in 1948, compared with eight cases in 1947, and 23 in 1946.

Dysentery.

The gradual decline referred to in the report of last year, when 83 cases notified were compared with 114 in 1946, and 386 at the peak in 1945, steeply descended to 18 cases notified in 1948.

However, we must never be satisfied until there are no cases in the city, for this is a preventable disease. We must intensify our campaign for cleanliness, particularly in regard to food handling.

Measles.

There were 5,513 cases notified in 1948, the highest number since notification began in 1939 (3,865 cases in 1947).

	1948	1947	1946	1945	1944	1943
1st quarter	72	1,783	16	2,912	24	4,630
2nd "	361	1,813	49	722	19	518
3rd "	1,355	204	44	67	31	11
4th "	3,725	65	194	23	739	7
TOTAL	5,513	3,865	303	3,724	813	5,166
Deaths	1 (4th quarter)	3	—	9	2	6

Whooping Cough.

During the past year the highest number of cases (1,838) was recorded since notification began in October, 1939. (747 cases in 1947). The previous highest figure was 1944, with 917 notifications.

Eight deaths have resulted from this cause during 1948 (four in 1947, four in 1946, eleven in 1944).

Respiratory Diseases.

The year's figures show an improvement on all last year's figures for deaths from bronchitis, pneumonia and influenza.

Notifications from acute primary and influenzal pneumonia are slightly in excess of those for 1947.

TUBERCULOSIS (all forms).

A total of 540 cases of pulmonary tuberculosis has come to the notice of the department during the year, by notification or otherwise. This compares with 521 during the previous year, and 598 during 1946, the highest since 1931. The average for the immediate pre-war years was approximately 500 cases per annum. Deaths from this cause in 1948 numbered 210; there were 251 in 1947 (unadjusted local figure).

Cases of non-pulmonary tuberculosis totalled 95, both for 1947 and 1948. Deaths within the city at a total of 30 bettered the previous year's figure, 35 (R.G. figure).

Dr. C. J. Campbell Faill, senior chest physician, reports (statistics page 147) as follows:—

The work of the tuberculosis section continued during 1948 until the take-over by the Regional Hospital Board in July, with little or no variation. The small clinic in Southmead Hospital has fully justified its existence.

In the year 1948, there has been a decrease in the total number of deaths, but the proportion of young adult deaths remains much about the same. (Figures in brackets indicate deaths occurring in the 15-25 age group):—

	(Adjusted local figures)	
	<i>Pulmonary</i>	<i>Non-pulmonary</i>
1938	231 (45)	40 (13)
1943	252 (37)	54 (11)
1946	236 (35)	30 (5)
1947	243 (41)	36 (6)
1948	213 (28)	28 (4)

The total number of new cases examined for diagnosis has again declined. The numbers examined were:—

1945	2,684
1946	2,593
1947	2,253
1948	2,171—to December 31st, 1948.
(to June 30th, 1948—1,111).	

This is entirely due to the activities of the radiological departments in x-raying and reporting on cases sent by general practitioners. Many of these cases would have been referred to the chest clinic for examination and report. The number of cases x-rayed and reported on by the radiologists for general practitioners was:—

1947	4,517
1948	5,279

The mass radiography unit continues to be of great value in finding quite unsuspected cases of pulmonary tuberculosis. The number of such cases is small, but being entirely unknown and unsuspected, they constitute a danger to those in contact with them. The mass radiography unit, when in Bristol, is of great assistance in examining contacts of definite cases. Unfortunately, the unit has to go "on tour" to different parts of the south-west region. When we have a permanent unit in Bristol, (as we hope to), many more contacts can be examined, as these mass x-ray examinations are both expeditious and economical.

The number of attendances for refill of artificial pneumothorax has increased very little since 1947, and it looks as if we may have reached our maximum number.

It seems a great pity that the results of treatment by streptomycin in experimental animals was so publicised in the press. In actual use on human beings, streptomycin has proved rather disappointing. There have been a few dramatic results with T.B. meningitis, but the number of acute fatal relapses has been very great.

Another new treatment has been P.A.S. (Para amino salicylic acid). So far we have used this very little, but the reports from other parts of this country and from abroad are rather conflicting.

Our very few cases of lupus we have continued to treat with massive doses of calciferol, with excellent results.

Care and After-care Arrangements.

Financial Assistance.

Mr. C. L. Bryant, who is the tuberculosis welfare officer and honorary secretary of the Bristol Tuberculosis Voluntary Care Committee, reports as follows:—

The government scheme of financial assistance for cases of pulmonary tuberculosis, which came into operation as a war-time measure in 1943, and which has been administered by local authorities, came to an end on the 5th July, when under the National Assistance Act, the payment of special allowances for these cases became the responsibility of the National Assistance Board.

The number of applications received and dealt with by the department, from 1st January to 4th July, was 182.

The number of patients in receipt of the allowances on the 5th July, and transferred to the care of the Assistance Board was 330.

At the time of transfer (5th July) the weekly payments amounted to:—

(a) Maintenance allowances	... ..	£334
(b) Discretionary allowances	... ..	£22
(c) Special payments	... ..	£18
(d) Maintenance allowances (Social Welfare scales)	... ..	£123

The increased National Insurance benefit payable from the 5th July, together with the allowance payable by the National Assistance Board, resulted in a slight increase in the income of many of the patients transferred.

This special financial assistance is limited to persons suffering from *pulmonary* tuberculosis who have given up remunerative employment to undergo treatment recommended by the tuberculosis officers.

It is regretted that this assistance does not extend to patients suffering from *non-pulmonary* tuberculosis.

The welfare officer co-operates with the local officers of the Assistance Board by arranging for the patient to be issued with an application form and the necessary medical certificate to be completed by the tuberculosis officer and forwarded to the Board.

Since the 5th July, 195 patients have been assisted in this way.

Extra Nourishment.

Extra nourishment by way of two pints of free milk per day is available to patients suffering from tuberculosis, subject to an income limit.

During 1948, 177 new grants of milk were made, and the daily average number of patients in receipt of this free milk was 225.

Rehabilitation.

During the year, 99 patients were referred, on the recommendation of the tuberculosis officers, to the Ministry of Labour, for registration under the Disabled Persons (Employment) Act, with a view to being placed in suitable employment or sent for training.

<i>No. referred</i>		<i>No. placed in full-time employment</i>	<i>No. placed in part-time employment</i>	<i>No. sent for training</i>
Males	55	19	3	8
Females	44	23	3	3

It is hoped that the Voluntary Care Committee's workshop at Southmead Hospital will be opened shortly as a Remploy factory by the Disabled Persons (Employment) Corporation, employing disabled tuberculosis men.

After-Care Work.

The number of patients assisted by the Voluntary Care Committee during 1948 was 226, as compared with 172 in 1947, and details of this help are given below:—

Grants of clothing	... ..	111
Bedsteads and Bedding	... ..	55
Footwear	... ..	23
Furniture	... ..	2
Invalid chair (loan)	... ..	2
		193
<i>Cash Allowances—</i>		
Towards cost of domestic help	... ..	8
Travelling expenses	... ..	7
Pocket money (patients in hospital)	... ..	3
Cost of spectacles	... ..	2
Convalescent home treatment	... ..	1
Removal expenses	... ..	4
Sundry	... ..	8
		33

The assistance granted by the Committee is not limited to the patient, and is extended to dependants.

Occupational Therapy.

The classes of Occupational Therapy commenced by the Voluntary Care Committee in 1946, have continued.

Three sessions, each of two hours, are held each week with an average attendance of ten patients at each session.

In addition to leather work, embroidery, rug making, slipper making, and toy making, a class in light carpentry will shortly be commenced.

Patients unfit to attend the classes, but who are able to receive instruction at home, are visited, and materials supplied.

Kiosks.

A kiosk has now been established at Frenchay General Hospital, finding employment for two ex-patients, the three kiosks at Ham Green, Southmead and Frenchay Hospitals, in addition to providing suitable employment for six ex-patients, give a much needed service at these institutions, catering for patients, visitors and staff.

General.

The welfare officer and staff work in close co-operation with the National Assistance Board, the Ministries of National Insurance and Pensions, the Welfare Services Committee, Regional Hospital Board, and Hospital Management Committees, and the Council of Social Service.

Mass Radiography (statistics page 148).

No report available.

Venereal Diseases (statistics page 148).

On July 5th, 1948, the Bristol venereal disease service—with the exception of the welfare department, was transferred to the South-West Regional Hospital Board.

During the year new registrations and attendances have decreased on a parallel with national statistics. The decrease has particularly affected the incidence of the specific infections. The conditions classed as "non-venereal" have been less affected, and in view of the intractability of some of these conditions, the total bulk of work has not markedly diminished.

Welfare Section.

Miss G. Stinchcombe and Mr. J. Deller, welfare officers, report as follows:—

Since the inception of the National Health Service Act, on 5th July, 1948, the welfare side of the venereal diseases department has maintained its customary high level, with a full measure of co-operation from the medical officers and staff, despite the technical separation of the medical and welfare aspects of venereal disease.

The following figures are a resumé of the work carried out from 5th July to the 31st December, 1948. The figures in parenthesis are for the whole years.

	M.	F.	M.	F.
Number of cases on welfare officers' register ...	580	337	—	—
New cases who attended through other agencies ...	822	230	(1,912)	(513)
New cases persuaded by the welfare officers to attend clinic for medical examination in view of possible risk of infection ...	44	47	(83)	(93)
Attendances at clinic ...	119	107	(245)	(260)
New cases interviewed in the clinic ...	164	98	(398)	(226)
Current cases interviewed ...	228	240	(499)	(608)
In-patients interviewed ...	121	85	(253)	(165)
Visits to defaulters in order to persuade them to return for continuation or resumption of treatment ...	298	223	(684)	(531)
Actual number returned ...	224	143	(512)	(351)
Consultations with voluntary bodies ...	46	42	(67)	(96)

Contact Tracing.

It will be appreciated that since Regulation 33B ceased to operate, thereby depriving the welfare officers of any legal background to assist them in their work, all new cases brought to the clinics by them have been done so from a purely persuasive angle. Without the legal assistance formerly provided by the Regulation,

the task of tracing new contacts to infection has become increasingly onerous. The tracing of contacts is very necessary and important, involving arduous, time-consuming, exacting investigation, and careful approach, in order that the confidential aspect may be maintained. Patients appreciate that their confidences are confined to one welfare officer throughout the whole of their attendance at the clinic. It is gratifying to report that a satisfactory measure of success has been achieved in the majority of cases by personal confidential approach. Regular patrol of the city's "black spots" have been carried out jointly by the male and female welfare officers. These patrols are carried out at night, when the public houses are closing, and promiscuity is at a high level. The venue of patrol varies as the "night workers" change their "beat" frequently.

Importance of Younger Age Group.

In view of the wide publicity now being given to youth and its problems, it is interesting to note that young people under 21 years of age represent 25% of the total intake of new patients. It must, however, be borne in mind that the sexual activity of the young persons referred to this department is but a small facet of their maladjustment to their social environment. Extreme care is taken with these young people, and every effort made to encourage them to direct their energies into worth while channels.

Default from Treatment.

This still presents many problems, but a good deal of quiet, constructive visiting has been carried out. Various reasons are put forward as an excuse for default, and still the most frequent is fear of recognition whilst attending clinic. Default usually occurs during period of observation after treatment has been completed, or primary symptoms have disappeared. The remedy obviously lies in the personal education of the defaulter as to possibilities following incomplete treatment of disease.

Rehabilitation and Interviews in Clinic and Hospital.

This aspect of welfare work has become a highly important and integral part of the departmental set-up, and it is here that many opportunities occur for rehabilitation and other vital welfare work. A total of 938 interviews have been given since 5th July, but it is impossible to enumerate in a brief report all the individual results accomplished in this field.

The following table will illustrate the marital problem as it affects our work in the clinic:—

No. of cases interviewed	Referred to Probation Officer	Successes		Results not obtainable	Failures
		Clinic Cases	Prob. Off.	Clinic Cases	Clinic Cases
47	2	39	2	4	2

Employment has been found for 25 patients, and ten were introduced to a club or other organisation. It is often found, on medical advice, that a patient needs change of employment, and in many cases is advised to sever all connection with their previous mode of living, and start afresh. The Ministry of Labour is extremely helpful in assisting us in this work, and it is gratifying to hear that in the majority of cases rehabilitation has been most successful. Advice is sought on a wide variety of problems and contact made with many professional and voluntary bodies in order to assist the patients to the best of our ability.

The V.D. Voluntary Care Committee for girls has been most generous in contributing the sum of £63 8s. 6d. in the assistance of four cases.

Lectures.

Four lectures have been delivered by the welfare officers to groups keenly interested in social work. Questions and discussions following the lectures were most encouraging.

Acute Rheumatism.

As mentioned in last year's annual report, acute rheumatism became notifiable in Bristol on the 1st October, 1947.

The term "acute rheumatism," for notification purposes, means any of the following conditions occurring separately or together in a person under the age of 16 years:—

- (a) Rheumatic pains or arthritis accompanied by a rise of temperature.
- (b) Rheumatic chorea.
- (c) Rheumatic carditis.
- (d) Valvular disease of the heart of rheumatic origin.

Notifications received:—

For the year ending 30th September, 1948, ninety-one cases were notified to the medical officer of health by general medical practitioners.

Quarter ending 31st December, 1947	...	...	36
" " 31st March, 1948	...	...	27
" " 30th June, 1948	...	...	17
" " 30th September, 1948	...	...	11

The majority of notifications were received in the winter months.

Notification procedure.

The general procedure of notification has been as follows:—

The notification details from the general practitioner are supplemented by any additional information that may be in the possession of the health department (*e.g.*, through the school health service) are forwarded to Professor Bruce Perry. Arrangements are then made for the investigation of the case—as a hospital outpatient, by admission to hospital, or by examination in the patient's own home.

If the diagnosis is confirmed, additional information (social and environmental circumstances of the family) is collected by the health visitors and sanitary inspectors. In this way it is hoped to build up statistical information about possible factors in the causation of acute rheumatism.

Confirmed individual cases are dealt with as follows:—

- (a) By seeing that the appropriate treatment is instituted as soon as possible, and that the necessary arrangements for after-care and advice are made.
- (b) By ameliorating, wherever possible, any home circumstances considered to be detrimental to the case.

Analysis of results.

The co-operation of general practitioners and patients has been good. Of the 91 notified cases, three were not investigated because of their removal from Bristol, and the parents of four cases refused co-operation. Fifty-seven were confirmed as cases of acute rheumatism (including primary and recurrent attacks). Four cases are still under investigation.

The table below gives an analysis by age and clinical classification of the notifications received during the twelve months under review.

ANALYSIS BY AGE AND CLINICAL CLASSIFICATION OF CASES NOTIFIED AS
ACUTE RHEUMATISM, OCTOBER, 1947—SEPTEMBER 30TH, 1948.

Clinical Classification of Case Notified	Age in Years												All Ages							
	0—4				5—9				10—14				15				Total Prim.	Total Recur.	Total Prim. and Recur.	M. F.
	Prim.		Recur.	Prim.		Recur.	Prim.		Recur.	Prim.		Recur.	Prim.		Recur.					
	M.	F.		M.	F.		M.	F.		M.	F.		M.	F.		M.					F.
1. Rheumatic pains or arthritis (a) with carditis (b) without	—	—	—	6	2	—	1	4	3	2	4	1	—	—	11	5	2	5	13	10
	—	1	—	4	3	—	—	5	4	—	—	—	1	1	9	9	—	1	9	10
2. Rheumatic chorea (a) with carditis (b) without	—	—	—	—	2	1	—	—	1	—	—	—	1	—	0	4	1	—	1	4
	—	—	—	2	2	—	—	—	6	—	—	—	—	—	2	8	—	—	2	8
3. Rheumatic carditis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	—	1	—	12	9	1	1	9	14	2	4	1	2	—	22	26	3	6	25	32
4. Chronic rheumatic valvular disease	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	Total rh'matic cases				57	
5. Congenital heart disease	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6. Other non-rheumatic heart disease or disorder	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7. Not rheumatic or cardiac disease	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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It would be unwise, in the absence of controls, to draw any firm conclusions from the small number of cases involved, but it is interesting to note:—

- (i) The age group 10—14 years appears to be the one at greatest risk. This is in accordance with previous investigations.
- (ii) Males and females have been affected almost equally. This also, is in accordance with previous findings.

Social and environmental circumstances.

It is interesting to note that of the 57 accepted cases:—

- (i) There was a family history of rheumatic fever or heart disease in 33 cases, *i.e.*, 58%.
- (ii) Overcrowding, in the sense that the patient had to share a bed or bedroom, occurred in 20 cases, *i.e.*, 35%.
- (iii) Dampness of the dwelling—rising, penetration or condensation—was present in 14 cases, *i.e.*, 24%.

In the absence of control investigations, *i.e.*, similar enquiries in families comparable, as far as possible, in all respects except the occurrence of a case of acute rheumatism in the family, it would be unwise to draw any conclusions from the environmental and socio-economic data so far collected. However, it has long been held that acute rheumatism tends to run in families and is more frequently seen in overcrowded and damp houses.

The Rheumatic Fever Committee of the Royal College of Physicians hope to collect information on control families in the near future.

Disposal of cases.

The 91 notifications were dealt with as follows:—

(i) Treated at home and clinic follow up ...	...	8
(ii) Treated in a general hospital ...	...	10
(iii) Recommended for transfer to Winford Hospital		41
(iv) Still under investigation ...	...	4
(v) Not possible to investigate ...	...	7
(vi) Not rheumatic or cardiac disease ...	...	21

Distribution.

It is noteworthy that areas such as Shirehampton, Stoke Bishop, Sneyd Park, Clifton, Westbury Park and Redland have shown few, if any, cases, whereas there have been groups of cases from Knowle, Bedminster and Southmead. It may be that this distribution is a reflection of the socio-economic circumstances of the people living in these areas rather than being due to any difference in environment. The housing of many of the cases occurring in the latter three areas is quite satisfactory.

Schools.

The accepted cases of school age numbered 52.

They were attending one or other of 45 schools.

From one school there were 4 cases; from three schools there were 3 cases each; from four schools there were 2 cases each.

Next year it is hoped that it will be possible to investigate a series of controls, as this would considerably enhance the value of the investigations being carried out.

Food Poisoning.

The following table gives details regarding food poisoning outbreaks investigated by the Food and Drugs Section during the year.

Suspected Food Poisoning Outbreaks for year 1948				
Total No. of suspected outbreaks	No. of cases	No. of deaths	Organisms or other agents responsible	Foods involved
17	30	Nil	Salmonella organisms appeared to be responsible and were typed as:— 14 outbreaks—Sal. typhi murium. 1 outbreak—Sal. Newport. 1 outbreak—Sal. Paratyphi B. 1 outbreak—not typed.	In these outbreaks of Salmonella, no specific food-stuff could be found attributable to source of illness.
1	3	Nil	Heavy growth of non-hæmolytic staphylococcus may have caused the illness.	Beef paste which was found to contain the non-hæmolytic staphylococcus organisms.
1	4	Nil	Hæmolytic sporing organisms were isolated in the food and may have caused the illness.	Soya flour and almond paste made with the flour.
1	20	Nil	Zinc contamination of fruit cooked in galvanised container appeared to cause the illness.	Rhubarb which had become contaminated with zinc in cooking.
3	(i) 35 (ii) 70 (iii) 3	Nil	Nothing significant was discovered.	Nothing significant could be found to involve any food-stuff.
23	165			

It should be pointed out, however, that all these outbreaks of illness were only suspected as being due to food poisoning. In some cases, where an organism was isolated by the bacteriology department, it was reported that it may have caused the illness.

During the year there were 30 cases of Salmonella infections. Fifteen of these were isolated cases, but there were two small outbreaks involving seven and eight persons respectively. The source of infection was not discovered in any of these cases.

The remaining six outbreaks included three outbreaks of illness after school meals (two Education Committee schools and one private school). In the case of the private school, the illness was caused by rhubarb being contaminated with zinc from a galvanised container in which it was cooked. The other three outbreaks included were reported to the Food and Drug Section by persons suspecting food poisoning; these affected three, three and four persons respectively.

Appendix I

THE ENVIRONMENTAL HEALTH SERVICES

<i>Chief Sanitary Inspector</i>	<i>F. J. REDSTONE</i>
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With comments on the following departmental sections:—

GENERAL SANITATION

HOUSING

MEAT INSPECTION

FOOD INSPECTION

RAT & MICE DESTRUCTION

PORT HEALTH.

Sanitary Circumstances, Housing and Inspection of Food.

An attempt has been made in this report on the environmental health services to indicate the work which has been carried through during the past 12 months in an effort to safeguard the health of Bristol's citizens, and to prevent illness and disease among them.

It has been written that "health is the soul which animates all enjoyments of life, which fade and are tasteless, if not dead, without it." It seems clear, however, that good health is something which many people do not think about very much until they lack it. It certainly rests with these people to make full use of the rules for healthy living and facilities provided to prevent illness if health departments are to function as a real bulwark in the fight against disease.

At the end of the year under review, reference was made to the Bristol Corporation's plans for 1949, in which it was stressed that the progressive deterioration of many of the older houses in the city was causing grave concern. Although a tremendous amount of temporary repair work has been carried through, it is clear that the council will have to give special consideration to the problem of how best to deal with these unfit houses which contain so many factors likely to lead to ill-health of occupants.

The extensive variety of interests in the sanitary inspector's department which have a direct bearing on the health and well-being of the people are, of course, well-known to the members of the Health Committee, but not everyone is aware that, in addition to general sanitation, this work includes the investigation and improvement of housing accommodation, port sanitation, the purity of water, milk and all other food supplies, inspection of meat supplies and the investigation of food borne epidemics.

These then are the main functions, but a great deal of time is taken up by many other subsidiary responsibilities which range from action necessary to clear weedy land to the sampling of rag flock used in bedding.

Whilst the great advances made in medical and natural science have largely contributed to the improved health of the people, it is generally accepted that environmental health conditions must be constantly watched and advanced if the benefits already established are to be maintained.

Successes during the year by officers of the section.

The following further qualifications were obtained by officers of the section during the year:—

Diploma in Public Administration, Bristol University—Final—M. G. Wintringham

Diploma in Public Administration, Bristol University—Final—F. Jones

National Association of Local Government Officers—Intermediate—C. W. Robinson

Papers given at National Conferences :

1. The Royal Sanitary Institute Congress at Harrogate. "Housing with special reference to Housing Standards," by R. Williams.
2. The Sanitary Inspector's Association Conference at Blackpool. "Atmospheric Pollution," by F. J. Redstone.

Formation of Sanitary Sub-Committee.

The Health Committee decided to form a sanitary sub-committee to deal with all environmental health matters. It was considered that this small committee of six members would be able to pay greater attention to the work carried out by the chief sanitary inspector's department and, in addition, arrangements would be made for visits to the various types of premises controlled by the health and food laws. This sub-committee meet monthly and the first meeting was held on the 3rd September, 1948.

Office Administration.

The improved clerical facilities afforded to the technical officers has enabled them, despite their short numbers, to cover a considerable amount of work. The easing of the licensing restrictions has permitted a great deal of repair work to be executed without quite as much difficulty as we have been accustomed to during the war and post war years, and the department has dealt with 5,534 complaints which resulted in the service of 1,607 statutory notices. At the end of the year there were 171 statutory notices outstanding. To achieve this position it has been necessary for the inspectors to carry out 38,078 visits.

These results were obtained despite the frequent changes which have taken place in technical staff. It is hoped that in the future a national uniformity in salaries will prevent this constant movement of staff to and from local authorities and that the process will assume more normal proportions.

Repairs to property in owner's default.

There was a carry over of fifty properties from the previous year, where repair work had to be considered in default of owners, and during the year under review, a further 98 properties came up for similar action. These 148 properties, involving some 177 notices, were dealt with as follows:—

80 were repaired by the Corporation's contractors.

35 were repaired by the owners.

10 were ultimately considered not suitable for default.

This left a total of 23 properties outstanding at the end of the year. Of these 12 were being repaired by the Corporation's contractors, two were being dealt with by the owners, and nine were awaiting action.

This year has proved a successful one for default action and again reveals evidence that building repairs are progressively becoming easier. Proof of this is that the properties outstanding and awaiting action are reduced from 50 last year to nine in number at the end of 1948.

When this scheme was commenced it was anticipated that the properties on which action of this kind was necessary would be gradually reduced as the effect of prompt action by the department became apparent to the various owners. The results this year have given solid evidence that this view was amply justified. The number of cases in which default action was necessary during 1948 shows a decrease of 30% on the previous year, and it is thought that in the not too distant future, default action will be even more exceptional.

Housing.

"The housing problem" is a phrase which for a variety of reasons is in daily use, but unlike some oft repeated phrases it has lost nothing in importance because of its constant repetition. To tenants of totally unfit houses, provision of a new house or suitable alternative accommodation is the only real answer, whilst to owners of dilapidated but repairable property, the problem is often bound up with limited financial resources.

For some ten years now, restriction and control of building has placed emphasis on new construction, thus causing incomplete operation of repair powers contained in the Housing Acts. Local authorities have therefore been faced with the difficult task of steering a way through these restrictions in order to secure tolerable conditions in the thousands of houses needing attention.

To this must be added the complications arising from short and long term planning schemes, consideration of which often prevents any extensive improvement being carried through on properties calling for attention.

The feeling of frustration felt when these responsibilities cannot be classed as priority has not been eased during 1948. However, there are signs that arrestment of the rapid deterioration now taking place in a great deal of housing property is a matter on which attention is to be focussed by the government following representations by many local authorities and their associations.

The housing activities of the public health department during the year have directed attention to many problems, including the following:—

- (1) Overcrowding.
- (2) Underground rooms used for human habitation.
- (3) Cost of repair and reconditioning works.
- (4) Re-occupation of houses subject to demolition orders and undertakings "not to use."
- (5) Dangerous buildings.

(1) *Overcrowding.*

The overcrowding provisions of the Housing Act have never been acclaimed as setting a high standard of accommodation because every living room in a house must be considered as a potential bedroom. As a result of a survey carried out under the Housing Act in 1935, it was ascertained that even with this low standard there were 1,962 Bristol houses in an overcrowded condition. Prior to the war the speed of rehousing the families concerned exceeded additions to the overcrowding register and the problem was fast being overcome. The position today, cannot be represented statistically but, from general observation, it seems clear that the overcrowding figure is substantially greater than that revealed by the afore-mentioned survey.

Stress laid on the need to use all available accommodation during and since the war and many other factors have contributed to this position, which can only be satisfactorily solved by the provision of new houses.

(2) *Underground Rooms.*

A rapid survey carried out in Bristol during 1937 revealed that some six thousand underground rooms were used for human habitation, although in the majority of cases such rooms represented only part of the occupants' total accommodation.

There is a growing reluctance on the part of families to living in such underground dwellings, and the many complaints received during the year resulted in the making of twenty-one orders prohibiting the use of unsatisfactory accommodation. It must be emphasised that if the time was opportune this number could have been multiplied many times.

(3) *Cost of Works.*

The provisions of the Housing Act, 1936, insist that owners of property which cannot be repaired at reasonable cost, must be given the opportunity of making a decision as to whether or not it is in their best interest to spend large sums of money in order to carry out works on dilapidated properties to render them in all respects fit for human habitation.

In view of the present day cost of works it is not surprising that in an increasing number of cases owners have offered their properties to the housing committee either free or at a nominal figure. Even so, the acceptance of these offers has not always been automatic, and the Housing Committee have, on occasion, been advised against the acquisition of such "problem properties," the required expenditure on which would be disproportionate to the ultimate value of the houses.

(4) *Re-occupation of Houses subject to Orders.*

The search for housing accommodation has sometimes lead to the re-occupation of properties with demolition and closing orders operative on them. At the end of 1948 there were some 680 of such properties still standing, forty-five per cent. of them being void.

These difficulties arise from incomplete demolition procedure and similar problems will continuously occur whilst shelters of this kind remain. Families who enter such accommodation give a variety of reasons for their action, including:—

- (a) That the house offered better accommodation than that previously occupied.
- (b) That a house, no matter what its accommodation, is better than "rooms" or an institution.
- (c) That ejectment orders forced them to "take what they could find."
- (d) The hope that alternative accommodation may ultimately be offered them.

The tendency to re-occupy condemned accommodation has not reached serious proportions, and only three cases were proceeded against during the year, resulting in fines of £4, £3 and £2 being imposed.

(5) *Dangerous Buildings.*

There has been a considerable increase during the past few years in the number of complaints received with regard to dangerous structures. To ensure that the most satisfactory action is taken in each particular case, an effective working arrangement has been established with the city engineer who is the officer having jurisdiction over this matter.

The limitations in the legal provisions applicable to dwelling houses in a dangerous condition often make consideration of action under the housing act advisable; in addition, care is taken to see that full information is available to all interested parties regarding properties included or likely to be included in clearance areas. Thus the local authority and owners are in a position to determine action with a full knowledge of all relevant information.

Housing Act, 1936.

Houses Inspected and Represented to Committee.

Section 9	...	...	...	...	...	...	Nil
Sections 11 and 12	...	...	...	...	...	...	163
Clearance Areas	...	...	...	...	...	...	Nil

Orders Made.

Section 11 (Demolition)	...	...	...	...	...	55
Section 12 (Closing Orders)	...	...	...	...	...	21
Section 11 Undertakings to repair accepted	...	...	...	...	...	8
Section 11 Undertakings "not to use" accepted	...	...	...	...	...	1

Houses Repaired.

Section 11	...	...	...	...	...	4
Undertakings "not to use" cancelled after repair	...	...	...	...	...	1
Other repairs	...	...	...	...	...	6

Section 15—Appeals against Demolition Orders. ... 3

Subsequently withdrawn	2
Hearing pending	1

Section 155.

Recovery of possession	1 case
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BRISTOL

AVONMOUTH DOCKS
SHIREHAMPTON
ROUTE OF MEAT (CARCASSES)
FROM AVONMOUTH DOCKS
TO DISTRIBUTION CENTRE,
APPROXIMATE DISTANCE
7 MILES.
HAM GREEN

WESTBURY ON TRYM
HORFIELD

REDLAND

CLIFTON

CORPORATION ABATTOIR
GORDON RD, ST GEORGE

DIAGRAMMATIC CHART

SHOWING ROUTE OF LIVE CATTLE BY
ROAD FROM RAILWAY SIDINGS TO PLACES
OF SLAUGHTER—I.E. ABATTOIR, ST GEORGE
& CATTLE LAIRS HOTWELLS. ALSO ROUTE
OF CATTLE BY ROAD FROM RAILWAY
SIDINGS TO CATTLE MARKET & BACK
AGAIN TO SIDINGS.

HOTWELL CATTLE
LAIRS

FLOATING HARBOUR

OLD MARKET
DISTRIBUTION CENTRE

ST PHILIPS
RAILWAY SIDINGS

CATTLE
MARKET

ST PHILIPS MARSH
RAILWAY SIDINGS

BEDMINSTER

ASHTON

KNOWLE

WHITCHURCH

DISTANCE BY ROAD
BETWEEN SIDINGS AND
PLACES OF SLAUGHTER IS APPROX:
2 1/2 MILES EITHER WAY.

REFERENCE

ROUTE OF CATTLE BY ROAD SHOWN THUS ————
ROUTE OF MEAT TRANSPORTED BY ROAD TO
DISTRIBUTION CENTRE SHOWN THUS —•••••

Section 14.

Penalty for using or permitting to be used premises subject to Closing Orders	2 cases
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Other Information.

(1) Rent Restriction Certificates	35
(2) Requests for information from Land Charges Office	...	316

Tents, Vans and Sheds.

The problems created within the city area by people who wish to live in movable dwellings have often been reported to and discussed by the Health Committee. It is quite clear that establishments of this kind are undesirable, particularly in residential areas, and every effort has been made in the interests of public health to prevent encampment of families in converted vans and similar shacks.

During the year a few groups of people occupied various sites including one in the central area of the city, and necessary measures were taken to secure vacation of the land in each case.

Meat Inspection.

For some years the question of slaughtering facilities for home killed meat has been receiving consideration by the appropriate Ministries. There are some who hold the view that this service would be best operated to a national plan and there seems no doubt that changes to ensure more satisfactory facilities for slaughtering and meat inspection will ultimately be evolved. A degree of centralisation has been in operation since 1939 in the Bristol area; from that time the abattoirs have been used for the slaughtering of home killed meat consumed in the city, and other adjacent areas in this region, including Bath, Kingswood, Clutton, Thornbury, Norton-Radstock, Mangotsfield and Keynsham.

The normal routine inspection of meat slaughtered in the city was carefully followed, and a total of 101,793 carcasses were dealt with in this way at the abattoirs, bacon factories and the various institutions. This procedure resulted in more than 418 tons of meat being condemned as unfit for human consumption. During 1948 there was a considerable reduction in the number of calves slaughtered; this was no doubt due to government policy of paying subsidy to farmers for rearing calves.

In early October it came to our notice that there appeared to be an increase in this country of carcasses infested with the cystic stage of tapeworm, *tænia saginata*. As man forms one of the hosts in the life cycle of this parasite, the increase in infestation was of the utmost importance. In fact, the position was so acute that the Ministry of Food issued a circular on the 8th November, which drew attention of all the local authorities' officers to the need for extreme alertness in detecting infected carcasses.

Events have already shown that it was a timely warning on their part. Cases of measly beef, as the condition is called in the trade, have already occurred in Salisbury, Exeter, Andover, Plymouth, Scotland and Bristol. Glasgow found some 300 cases in two months, most of which were Irish cattle.

The view has been advanced that a possible factor in the increase in cases of cysticerci is that whereas there may be a "normal" percentage of the population in this country affected, the large number of troops, including allies, prisoners of war, and displaced persons from overseas, where the incidence is very much higher, and who have been housed under more or less primitive field conditions, has tremendously increased the contamination of land.

Our own investigations support this view, as when enquiries have been made as to the pasturage of the affected animals, it has been found that the fields had been recently treated either with sludge from a sewage farm, or there had been persons from the above mentioned groups employed upon or near that land.

Full inspection of carcasses as suggested in the circular mentioned is carried out in Bristol, and involves incision of the masseter muscle in the head, muscles of the diaphragm, and the heart. A great deal of time is taken in making the detailed inspection for this purpose. We have arranged that the slaughtermen assist the inspectors by making the first cut into the masticatory muscles when dressing the head in readiness for inspection. Help of this kind has been very much appreciated, particularly where there are a large number of cattle to be examined.

Where the infestation found is slight, the affected areas are condemned and the remainder of the carcase given treatment which will render the meat safe for human consumption. This treatment is of a cold storage character and the carcase is kept at a temperature of either 12°F. to 14°F. for six days or 29°F. for 21 days. This treatment is undertaken by the Ministry of Food with the collaboration of the Wholesale Meat Supply Association, and all carcasses are re-inspected after treatment before they are released for food.

The parts of the carcasses and offal that are condemned are not permitted to be used for animal feeding stuff, but must be converted into fertiliser or similar products.

There is no means of ascertaining how wide this infestation may be, but up to the end of 1948 nineteen cases had been discovered in Bristol.

Public Abattoir, Whitehall.

The ravages of the war years, together with war damage, caused the paint-work and general maintenance at the Gordon Road abattoir to require special attention during the past year. Every effort was made by the Health Committee to carry out some of this work and to consider future schemes for the improvement of the premises so that the increased through-put may be dealt with more satisfactorily. Among other work should be mentioned extensive interior painting to the slaughter hall and the re-wiring of certain electrical installations damaged during the war. Improvements have also been carried out to the slaughtermen's meal rooms and clothes drying accommodation.

During recent years additional lairage of a temporary character has been provided and, as is often the case with this form of extension, certain features have proved troublesome. In this connection it was found necessary to improve the approach ramp used by the cattle, the surface of which was relaid with intersecting lines of brick in concrete, thus forming ridges to prevent cattle from slipping. Injury to cattle was also experienced through animals "spreading" themselves on the floors of the temporary lairages which had worn smooth, and consideration was given by the Health Committee to recommendations made to prevent this.

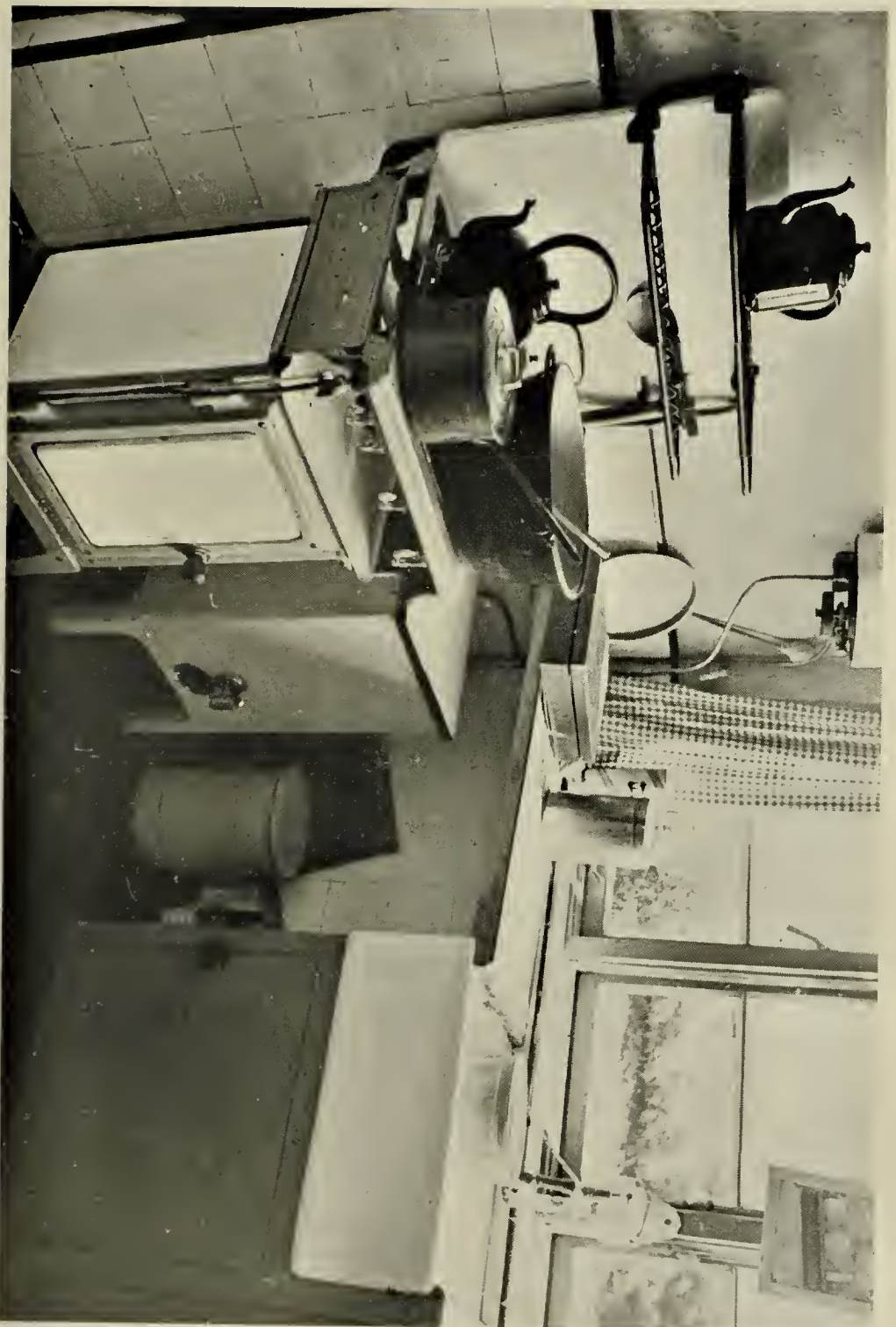
Lairage Accommodation.

When the abattoir was opened in 1935, permanent lairage was provided to accommodate 42 cattle, but since that time it has often been necessary to receive and accommodate more than 200 cattle at the same time. To do this, temporary accommodation was provided and an open paddock adjoining the railway line has also been pressed into use. "Pressed into use" is perhaps a good term as this expression would be agreed by all those who have seen the churned-up condition of this low-lying paddock during the winter months. To overcome this, cattle were, on occasion, accommodated in the approach road; difficulties and damage were experienced as a result of cattle breaking down the fencing which was certainly not originally installed to constitute a pen for use in this way.

These and other considerations resulted in various meetings between the Health Committee and Ministry of Food officials. At the close of the year a scheme for more satisfactory lairage accommodation of a permanent character was under consideration.

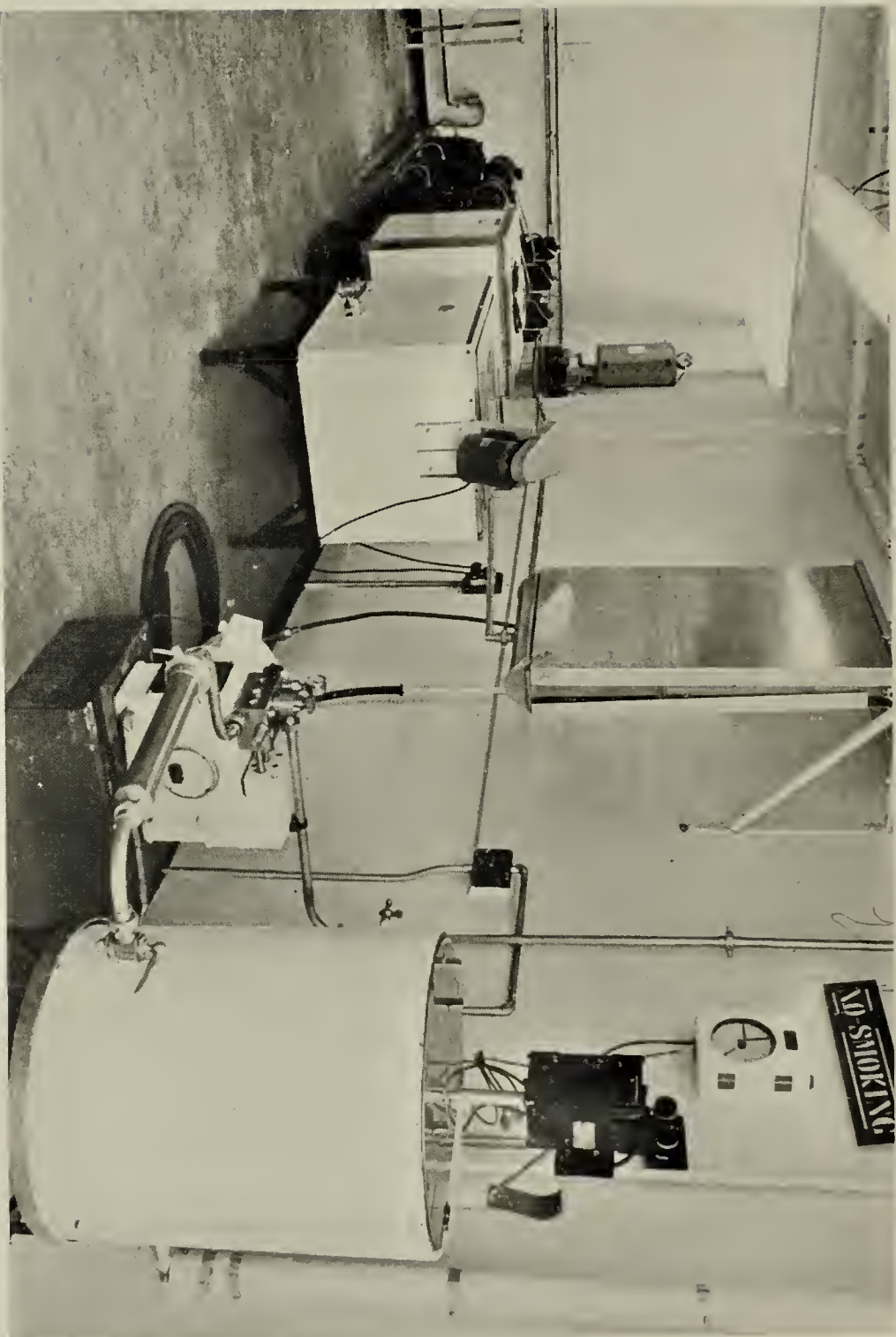
Direct Allocation of Meat Supply.

Since the closure of premises in the central area, previously used for the allocation of meat supplies to retailers, this work has been transferred to the abattoirs and suitable adjoining premises. This move eliminated a great deal of unnecessary handling and it is clear that the provision of adequate premises for the distribution of meat must be kept in mind during the design of all future abattoirs. Whilst the facilities now provided for the distribution of meat are much more satisfactory, the same cannot be said about the office and meal room accommodation provided for the clerks and meat humpers. This question received the attention of the Health Committee, and following discussions with the meat distributing associations, the city architect was instructed to prepare plans for the erection of a suitable building to accommodate all the men engaged on this work.



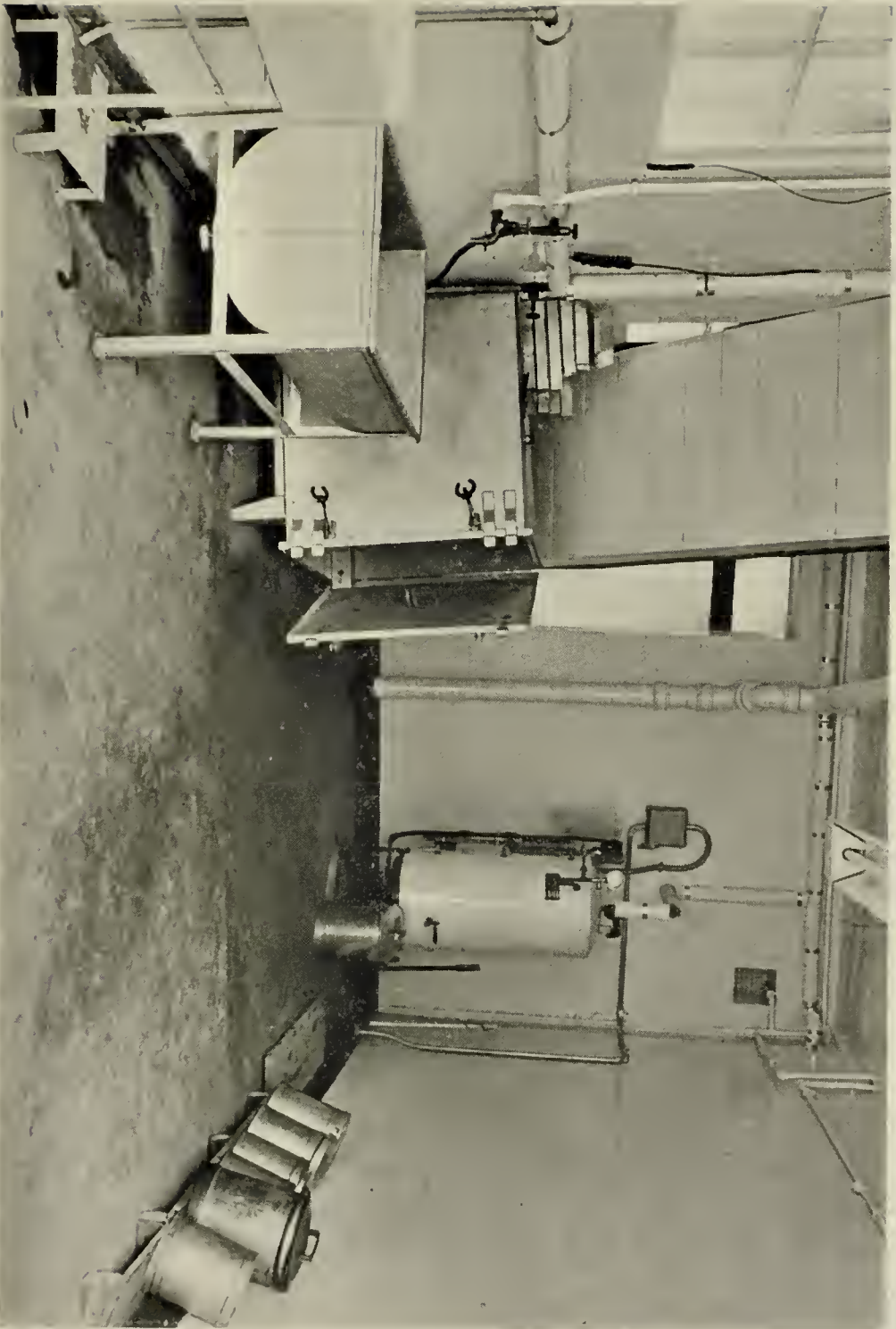
I.—ICE-CREAM MANUFACTURE PRIOR TO ICE-CREAM "HEAT TREATMENT" REGULATIONS 1947.

The bowl for ice-cream mixture can be seen on domestic cooking stove and possibilities of contamination readily appreciated. This Manufacturer now has premises shown in photographs II and III.



II.—ICE-CREAM "HEAT TREATMENT" REGULATIONS 1947.

Up-to-date equipment used by small producer. Photograph shows heat treatment and cooling room.



III.—ICE-CREAM "HEAT TREATMENT" REGULATIONS 1947.

Separate sterilizing room adjoining ice-cream heat treatment and cooling room.
Note electric boiler and special washing and steam sterilization equipment.



IV.—Sanitary Inspector obtains a fermal sample of milk for analysis under the Food and Drugs Act 1938

Meat Precinct.

Reference has been made in the annual reports presented since 1945, to the Bristol Health Committee's scheme for the establishment of a meat precinct at Avonmouth. It will be remembered that this modern conception of a suitably sited centre to deal with all meat production requirements, could not be proceeded with pending the government's general policy in regard to arrangements for slaughtering and marketing. The City Council has been informed that this policy is at present under consideration. Reference to the diagram included with this report will serve to emphasise the need for establishing a more coherent meat slaughtering and distributing policy.

Ice Cream.

A review of the situation regarding the registration of ice cream premises was made in July, when a full report was submitted to the Health Committee. A pictorial example of how the standards of ice cream premises have improved and the re-conditioning that is possible may be seen from the photographs printed with this report.

At the close of the year there were some 412 premises registered for either the manufacture, storage, or sale of ice cream.

During the year, 436 samples of ice cream were taken by the inspectors and submitted to the Ministry of Health methylene blue test and the Bristol bacteriological test. This would average out to at least one sample from each premises.

Biological Testing of Milk for Tubercle Bacilli.

It is the practice of the department to ensure that all milk supplies sold raw in the city are submitted to the biological test for the detection of tubercle bacilli. In addition, samples are taken from pasteurised milks as an additional check on the efficiency of the treatment. During the year 1,253 samples of raw milk were taken for this purpose, and of that number, 24 were found to contain tubercle bacilli. These samples involved 14 different farms. Five of the positive samples were from milk supplies which were being sold in the raw state.

There are real administrative and technical difficulties in preventing the sale of milk in this condition, despite the provision of the Food and Drugs Act, 1938. However, by arrangement with the milk marketing board, supplies are temporarily diverted to a pasteurising plant, where effective treatment is carried out which renders the milk safe for human consumption. This co-operation is of invaluable assistance to health authorities.

Procedure when samples are found to be positive is that notification is made to the county medical officer of health of the area in which the farm is situated. This information is in turn, given to the regional veterinary officer of the Ministry of Agriculture and Fisheries who arranges for one of their veterinary officers to visit the farm and carry out both clinical examination of the cattle and sampling of the milk from individual cows or groups of cows.

Fifteen cows were found to be affected with tuberculosis under this scheme and destroyed in accordance with the tuberculosis order. In five cases so notified, the veterinary officer failed to find the infected animal, and it had to be presumed that either the offending animal had been removed from the herd or that it was not now in milk.

After bacteriological examination of the milk samples taken by the veterinary officers has been completed, the department receives a copy of the final report which is to the effect that the farm should now be clear. As an additional safeguard the medical officer has requested that further repeat samples should be taken in Bristol before he will be satisfied. In two instances repeat samples taken after the veterinary officer's investigation were found to be positive and it was, of course, then necessary to repeat the whole procedure.

Food Sampling.

Food sampling is a very important part of a local authority's duties. Apart from the actual legal proceedings that may arise in connection with offences against the Food and Drugs Act, 1938, the variety of the foods and drugs sampled on visits by the department's inspectors serve to maintain the standards laid down for the various foodstuffs. In other words, the value of this work to the public must not be judged on the result of court cases only.

This year the 2,527 samples of food and drugs taken and submitted to the public analyst for analysis, represents a proportion of 5.8 samples taken per thousand of the estimated population in the city.

Of the 91 samples found to be not genuine 68 were milk samples. This food invariably does figure as the one most often found to be adulterated. The remaining adulterated samples were detected after sampling some 60 different kinds of food and drugs and included sausages, cake mixture, iodine and whisky.

Court action during the year resulted in four fines of £15, plus one fine of £5 being imposed, and twenty-four cautions were issued by the Town Clerk.

Basement Bakehouses.

The city records show that at the opening of the present century there were some 54 basement bakehouses in use and entered in the local authority's register.

The provisions of the Factory and Workshop Act, 1901, required that no underground bakehouse should be used as such unless it was so used on the 17th August, 1901, and laid down that these bakehouses should not be used after January 1st, 1904, unless certified by the local authority as suitable for that purpose.

The Factories Act, 1937, strengthened the law in connection with these particular premises and under section 54, basement bakehouses must be re-examined by the local authority every five years, with the object of determining whether or not conditions justify the continuance of these specially certified food premises.

The chief sanitary inspector presented a report, with sectional and block plans, to the Health Committee, in which it was shown that only seven basement bakehouses are still used in this city. The sanitary sub-committee visited and inspected these premises and resolved that each occupier should be requested to carry out improvements to the satisfaction of the chief sanitary inspector.

Butter Factories.

There are eleven premises used for the purpose of blending and reworking of butter on the local authority's register. On inspecting these premises it was found that only four of the factories were operating, but the other seven wished to retain their registrations.

Samples of butter taken at the four premises in use were satisfactory in each case.

Pharmacy & Poisons Act, 1933.

During the year 151 applications were received for the entry in the local authority's list of persons entitled to sell part two poisons, and 443 applications were received for the renewal of existing registrations. There were three cancellations, and this makes a total of 591 registrations at the end of the year.

Cautions were given to 32 shopkeepers for selling part two poisons without being on the local authority's list of persons entitled to sell such articles; of these 24 became registered for the sale of part two poisons, but the remaining eight decided not to sell this class of goods and returned their stocks to the wholesalers.

CITY WATER SUPPLY.

Particulars required by Ministry of Health Circular 3/49 (England).

1. Whether the water supply of the area and its several parts has been satisfactory. (a) in quality. (b) in quantity.	YES.
2. Where there is a piped supply, whether bacteriological examinations were made of the raw water and, where treatment is installed, of the water going into supply; if so, how many and the results obtained; the results of any chemical analysis.	Raw waters examined bacteriologically before treatment by Bristol Water Works Company. Raw water at Barrow before filtration—weekly. Raw water at Chelvey before chlorination—twice weekly—when pumping. Raw water at Litton before chlorination—monthly. After treatment found satisfactory.
3. Where the waters are liable to have plumbo-solvent action, the facts as to contamination by lead, including precautions taken and number and result of analysis.	NOT LIABLE. Water is not liable to lead contamination and no analyses were done.
4. Action in respect of any form of contamination.	On finding any trace of faecal pollution the matter is taken up with the appropriate authority immediately, and the question of treatment reviewed and suitable measures taken. Sampling is repeated until satisfactory results are obtained. Contamination after treatment has been negligible.
5. Particulars of the proportion of dwelling houses and the proportion of the population supplied from public water mains. (a) direct to houses. (b) by means of standpipes.	(a) The whole of the population in the Bristol area is supplied by public water mains direct to houses with the exception of a few isolated premises in the rural suburbs when the supply is free from private wells and subject to a form of chlorination. These are being gradually reduced as mains supply is laid on. (b) Negligible.

Atmospheric Pollution.

Problems connected with the establishment and maintenance of a cleaner atmosphere in the city continued to receive the close attention of the Health Committee who made further efforts to link up with all other committees and organisations who have a contribution to make in finding a solution to existing and future problems.

Further, realising that prevention of atmospheric pollution is much to be preferred to abatement, it is noted with pleasure, that the committees responsible for planning and reconstruction are fully alive to the need of forethought in these matters. One indication that those interested with new construction are conscious of the need for cleaner and better methods was the presence at the 1948 conference of the National Smoke Abatement Society of Mr. J. Nelson Meredith, the Bristol city architect, who presented a paper on "Smoke Prevention in Relation to Town Planning."

This conference was addressed by the Minister of Fuel and Power, who stressed that the government is sympathetic towards the work of the society, to which more than 300 local authorities, representing over half the population of this country, are now affiliated. One observes amongst the general population in this country the growing tendency to become smoke conscious; evidence of this was forthcoming in one of the largest industrial areas during a recent planning exhibition, when observations made by the general public stressed the need for smoke abolition more than any other subject.

The proposals for new legislation, formulated by the National Smoke Abatement Society, continues to receive the consideration of local authorities and various organisations. It is hoped that the final recommendations, to be drawn mainly with the object of preventing smoke, will prove to be of a practicable character and thus receive co-operative acceptance from all those concerned with their administration.

The Bristol and District Regional Smoke Abatement council continued its advisory activities during the year. One important feature of this work was the meeting of regional smoke abatement advisory committees held at Wolverhampton during January. This conference was attended by Alderman J. J. Milton, Mr. G. Curtis (Kingswood), and the chief sanitary inspector, who introduced a memorandum from the Bristol committee on "The Control of Smoke in the Future."

In addition, the Bristol Smoke Control Committee considered these new legislation proposals, and the City Council nominated the chairman of the Health Committee. Alderman J. J. Milton, to serve on a special committee set up by the Association of the Municipal Corporations to receive the views of representative local authorities.

The health department received a number of complaints regarding grit, smoke and fume emission from various industrial processes and every effort was made to bring about an abatement or at least a reduction of nuisance in each case.

Noise Nuisances.

There is an increasing tendency for people to complain about the various noises created by industrial processes. Whilst there is no general power enabling local authorities to deal with this matter, the Bristol Corporation Act, 1938, contains provision under which excessive or unreasonable or unnecessary noise which is injurious to health, may be dealt with subject to certain conditions.

Among the cases dealt with during the year were complaints arising in connection with night-work at motor service stations and bakeries, early morning operations at a dairy adjacent to residential property, noise from a fan fixed in roof of a malthouse, and from low flying and testing of aircraft. In all these cases a reduction in the noise complained of was secured without recourse to legal action.

Dust Nuisances.

A petition was received from 35 residents in a road traversed by lorries used in conjunction with the large scale excavation and clearance of a nearby building site. On investigation it was found that due to spillage from the lorries and the amount deposited from the tyres a considerable nuisance arose which prevented people from opening their windows without suffering an intolerable nuisance from dust. The building contractor and a representative of the transport and cleansing department met on the spot and satisfactory arrangements were made for the frequent watering and sweeping of the roadway by mechanical means during the course of these dust producing operations.

Complaints were also received regarding the emission of pulverised iron-ore dust from a works sited near many residential properties and a visit was made with the Ministry of Health, Regional Inspector of Alkali Works. Inspection revealed that the sources of emission were due to:—

- (a) "Bagging" of ground ore, and
- (b) From the final vent of the grinding plant itself.

The dust emission from the bagging operation was dealt with by the fixing of an enclosed and draughted bagging machine fitted with a suitable filter. The fixing of a number of water sprays in the final dust collector on the ore grinding plant brought about a considerable reduction and a further improvement is anticipated when the dust impregnated waste-steam has been utilized by leading it in pipes to the underside of the ochre drying beds.

Pig Keeping and Defence Regulations.

In normal times the keeping of animals such as pigs is controlled by byelaws which lay down certain conditions and restrictions to ensure that the buildings used to house these animals will be properly constructed and at a suitable distance from dwelling houses and water supplies, and for the disposal of manure. Byelaws of this nature were, in fact, in force in Bristol before the war. The Defence (General) Regulations, 1939, regulation 62B suspended restrictions of this character under the following terms:—

(1) It shall be lawful, notwithstanding any provision to the contrary in any lease of tenancy or in any covenant contract or undertaking relating to the use to be made of any land, and notwithstanding any restriction imposed by or under any enactment, for the occupier of any land—

- (a) to keep pigs, hens or rabbits in any place on the land; and
- (b) to erect or place, and maintain, such buildings or structures on the land, and to make and maintain such excavations and other works on the land, as are reasonably necessary for that purpose;

Provided that nothing in this paragraph shall—

- i. authorise any pigs, hens or rabbits to be kept in such a place or in such a manner as to be prejudicial to health or a nuisance; or
- ii. affect the operation of the Diseases of Animals Act, 1898, to 1937, or of any regulation made under the Emergency Powers (Defence) Acts, 1939 and 1940.

(2) For the purposes of any enactment regulating the erection of new buildings or the extension of buildings, by reference to the position of other buildings, no account shall be taken of any building, structure or excavation exempted by this regulation from the operation of that enactment.

A number of applications were made to the department by persons wishing to keep pigs and who sought our advice in connection with these regulations.

The only grounds on which the department could take action would be where an animal was kept in such a state as to be prejudicial to health or a nuisance. The effect of these regulations was that no person could be prevented from keeping pigs, hens or rabbits, so long as no nuisance was caused. Obviously, unless suitable buildings with proper drainage connections are provided and strict cleansing methods employed, nuisances must arise and a certain amount of difficulty was experienced in this respect.

Representations in connection with town planning difficulties of control in these matters were made by the city engineer at a meeting at national level when the problem was being discussed.

Rubbish Deposits.

The chief sanitary inspector reported to the Health Committee that a large number of complaints were being received regarding the deposit of refuse and rubbish of all kinds on the various bombed sites, waste land and back lanes throughout the city.

These deposits are made mostly under cover of darkness and the material includes a great deal of ordinary domestic refuse. It is hard to understand why this should be done, when we have an efficient refuse collection service under the control of the transport and cleansing officer. It is indeed difficult to see how one can foster civic pride and cleanliness whilst some citizens are thoughtless enough to create small tips on the nearest piece of waste land convenient to them. Such accumulations are an annoyance to other residents and form rat harbourage. The Health Committee, therefore, issued a special appeal through the press asking the public to co-operate and prevent this type of nuisance.

Rat Destruction.

The work of rat and mice destruction which has been intensified during recent years was continued with unabated vigour during the twelve months under review. The importance of this work was continuously stressed with the aid of the press and at various meetings of a health educational character.

Under the Transfer of Functions (Infestation) Control Order, the responsibility of the Ministries of Health and Food was passed to the Ministry of Agriculture and Fisheries, and satisfactory arrangements were made in this city for the continuance of a grant aided scheme during 1948/1949.

The control of both the common rat and the ship rat is of vital importance; this point is the more appreciated when it is remembered that rats and mice consume and contaminate the nation's food, transmit disease to human beings and cause great damage to goods and premises. One pair of rats can breed several litters in a year, producing seven or eight young at a time, and these offspring maturing three months after birth can then multiply at the same rate.

Apart from rat-proofing and proper storage methods, it is clear that the most important thing is to take quick measures to destroy the first rat or mouse invader noticed on the premises and thus prevent a resident infestation which is much more difficult to exterminate.

The following details of the work carried out during the year have been provided by the rat repression officer:—

"The total number of complaints received during the year was 2,192 (1947—2,243). Of this total 1,569 infestations received treatment by the staff of the health department, whilst in some cases the occupiers themselves carried out effective control measures under the direction of the rat repression officer.

The block control scheme which had been operated throughout the city was brought to a conclusion during the early part of the year and all work has since been carried out under a scheme of infestation control, approved by the Ministry of Agriculture and Fisheries, and adopted by the City Council.

During the year a rat operator, employed by the docks authority, retired and arrangements were made to replace this man by another trained operator, which means that we now have two experienced operators for this work, covering the duties necessary at the Avonmouth, Portishead and City Dock areas.

The refuse tips, incinerating and pig-food manufacturing plants, under the control of the transport and cleansing officer, have been regularly treated and these measures have been successful.

Extensive treatments which consist usually of a three to six week period have been applied to hospitals, clinics, schools and nurseries. The total number of treatments carried out at these premises was 186. Special attention was given to the restaurants and other food premises throughout the city and as a result of this treatment, a considerable number of rats were destroyed and advice was given on the measures necessary to prevent re-infestation.

The city sewerage system has been subjected to the two maintenance treatments as recommended by the Ministry of Agriculture and Fisheries. This work was carried out in an excellent manner by the city engineer's department, and the large number of poison-takes recorded show that good results had been obtained.

Under the transfer of functions (Infestation Control Order) it is now possible to establish a closer link between the city and dock areas and the benefit of co-ordinating this work and methods of treatment should be apparent during the next year or two."

The number of rats and mice actually recovered from all sources (other than shipping) during the year is as follows:—

Source	1948			1947		
	Brown	Black	Mice	Brown	Black	Mice
Docks, quays, warehouses ...	313	442	155	1,090	511	2,517
City generally ...	294	370	717	1,398	471	1,786
TOTAL	607	812	872	2,488	982	4,303

Disinfection and Disinfestation.

The disinfection services operated by local authorities still occupy a position of considerable importance in measures taken against the spread of infectious disease. Whilst opinion may be divided with regard to the need for disinfection in particular cases, there is no doubt whatever that apart from the destruction of bacteria, the treatment of sick rooms and used bedding, gives occupants a sense of security which would otherwise be lacking. In addition, it will be appreciated that the liberal application of disinfectant in some dwellings is long overdue and that this is often followed by the first real spring-clean the premises have received for some time!

The total number of jobs carried out by the staff at the Feeder Road disinfecting station was 6,112. Further information indicative of the general work carried out is as follows:—

Total number of articles disinfected	...	...	...	98,152
Total number of articles collected and destroyed	...	...	...	950
Total number of premises disinfected or disinfested	...	...	...	4,732

The steam disinfectors were put to full use during the year and the following quantities of material were employed on the work outlined above:—

Disinfectant	...	...	...	178 galls.
Liquid Insecticide	...	...	...	638 galls.
Powder Insecticide	...	...	...	92 lbs.

Public Conveniences.

Following a tour of inspection of the various types of public conveniences within the city area, the chief sanitary inspector made a general report to the sanitary sub-committee on the conditions found.

The transport and cleansing officer prepared a full report on the situation, type of construction and general maintenance of these conveniences, from which it is evident that additional conveniences and replacements are urgently required in certain situations; this work is to be undertaken within the planned programme already agreed by the appropriate committees.

Health Education.

It has long been recognised by the Bristol Health Committee that education must play an important part in any improvement in environmental conditions. The chief sanitary inspector's staff plays a major part in this work and during the year gave over 150 lectures to such organisations as townswomen's guilds, discussion groups, women's institutes, medical students, German teachers, men's clubs, pre-nursing and nursery nurse students, mothers attending clinics, teachers' training courses, pupil health visitors, British Legion and others. It is, however, appreciated by the department that without the personal contact and day to day advice, much of the interest and enthusiasm aroused by this formidable lecture programme would be lost.

In collaboration with the Merchant Venturers' Technical College and the Ministries of Health, Education, and Labour and National Service, the department has organised a further full time training course for sanitary inspector students, all of whom were ex-members of H.M. Forces. These courses were referred to fully in my annual report for 1946 when the first one was arranged. The results of both the first and second courses are to hand and provide grounds for satisfaction with the encouragement and facilities provided by the Committee. In the initial course some 62% were successful in obtaining the qualifying certificate at their first attempt, and we did even better at the second course—80% being successful at the first attempt. It is relevant to point out that the average pass percentage in the country for this examination is rarely above 50%. The committee has received many letters of thanks from the students concerned for the opportunities afforded them and this appreciation has been reiterated by the various Ministries.

Environmental Health Services—Inter City Visits—Leeds.

It is becoming recognised that visits of inspection and study of methods adopted by the larger centres of population to deal with the public health problems is of real value. During the year the chief sanitary inspector of Leeds visited Bristol with one of his staff and discussed many aspects of sanitary administration, particularly in connection with housing, meat inspection and disinfection.

The Leeds Health Committee reciprocated this arrangement by inviting the chief sanitary inspector of Bristol to visit Leeds and much valuable information was gained.

Port and Dock Sanitation.

An account of the work of the port inspectorate will be found in the report of the Chief Assistant Port Medical Officer (Appendix IV, page 58).

Appendix II

REPORT OF PREVENTIVE MEDICINE LABORATORIES, 1948.

By Dr. K. E. COOPER.

The year 1948 saw the inauguration of the National Health Service on July 5th, and the transfer of many functions of the local authority to the State either on a national or regional basis. To maintain continuity of service on the part of the laboratory it was necessary for the University to negotiate with the Regional Board, the Public Health Laboratory Service and the city authorities for acceptance by them of financial responsibility in respect of the routine service each authority requires. This necessitated estimating the work done for each authority on a basis commensurate with the amount of work entailed rather than the mere recording of the number of specimens examined. The unit system used by the pathological services of the Emergency Medical Service during the war, has been made the basis for this estimate, though it will require modification in detail from time to time, as conditions change. The additional office work required has, to some extent, been lessened by making monthly, instead of weekly reports to the Health Committee on the specimens examined. It is hoped that this longer period will give a fairer picture for comparison with previous years, and still keep the Health Committee aware of fluctuations in work undertaken by the laboratory. It must be remembered, however, that not even a unit system, based as it is on the number and kind of examinations made on each specimen investigated in the laboratory, really measures the work done or its value. This is particularly true in regard to the service rendered by the laboratory to the local authority. No units are allocated for the giving of advice or information in regard to the manifold problems about which the department is consulted every day.

The following sets out some of the subjects about which meetings or consultations have been held in the department within the last six months:—

1. Hygiene in restaurants, and choice of disinfectants for cleansing.
2. Operation of ice cream regulations—control of plants producing ice cream.
3. Condemnation of infected fresh meat—especially cysticercosis Bovis infection.
4. Controlled tipping—extent of dust borne contamination.
5. Smallpox contact control—vaccination—aircraft disinfection.
6. Immunisation against diphtheria, measles, typhus, plague, cholera.
7. Lack of legal control of the spread of tuberculosis by infective persons dealing with food and ice cream.
8. Canned food requiring condemnation.
9. Pollution and rat infestation of open air swimming pools.
10. New Zealand enquiry about legal control of milk in this country.
11. Laboratory control in venereal disease examinations.
12. Types and sources of salmonella infections and food poisoning.

In many of the above sections the enquiries and consultations have been numerous, and very time consuming. It is felt, however, that this is one of the laboratory's most important functions, and during the last ten years a very valuable file of information, classified on a subject basis, has been developed in the department. The academic research and teaching activities, which are naturally the most extended activity of a University department, have been omitted from the above list.

The total number of examinations done during the year was 123,383, an increase of 17,004 on the previous year. 2,859 were for authorities outside the city; 24,021 were on behalf of the Public Health Laboratory Service.

Examinations carried out for Southmead Hospital were approximately 31,000, for Frenchay Hospital 19,000 and Ham Green Hospital 6,000. Up to July 5th these were the responsibility of the local authority, and after July 5th of the Regional Board. Venereal disease examinations for the region (39,000 approximately) have been allocated to the Regional Board since July 5th.

No marked changes in the nature of the examinations have occurred, and item by item the number of examinations are very similar to those of 1947. Decreases in examinations for diphtheria and venereal diseases; increase in examinations for tuberculosis, blood cell counts, cerebro spinal fluids and histological examinations of body tissues were not in any case marked. Routine examinations of water, ice cream,

restaurant crockery and utensils were deliberately increased in connection with a general campaign for increased food hygiene. Attention is drawn only to those sections of work which have yielded information of particular value or interest.

Venereal Disease.

The most valuable method for following the progress of treatment entails the measurement of antibodies in the patient's blood by the quantitative Wassermann Reaction. The standardisation of the reagents used to measure these antibodies has been improved to maintain a constant sensitivity capable of measuring very small quantities of antibody. The reagents used for the ordinary Wassermann Reaction for diagnosis, are standardised by a different method to enable them to measure the wide range of antibodies in these patients.

An investigation of our records for the last ten years on suspected gonorrhœal patients showed only one quarter of the percentage of positives for circulating antibody in the years since the introduction of penicillin, compared with our results before its introduction. This fall has been observed in London and in Leeds, as well as Bristol, and is presumably due to rapid cures effected by penicillin, so that the gonococcal infection does not persist long enough, with modern treatment, to stimulate the same amount of antibody production.

An investigation into the relative accuracy of the smear and culture method of diagnosis has also been carried out. The cultural method has been so improved that even the difficult diagnosis in the female now yields over 90% of positive cultures. These results are being published.

Diphtheria.

Positive diphtheria cultures were obtained from only 28 patients in 1948, and none of these were in the last quarter of the year. The types were as follows (the previous year's figures being given in brackets for comparison):—

Gravis 3.6% (16.7%).

Intermedius 28.6% (45%).

Mitis 53.6% (28.3%).

Atypical 14.3% (10%).

The diminishing incidence of gravis infections noticed last year has thus continued. The last quarter of the year gave no positive finding—the first time this has occurred in the history of the laboratory. The fall of diphtheria positives isolated in the laboratory during the last 10 years (inversely proportional to the intensity with which immunisation has been practised) is well illustrated by the accompanying graph.

Food Poisoning.

Some minor cases of toxic food poisoning were associated with keeping food on hot plates for too long an interval before consumption. The food was probably infected by an attendant with an infected nose during the preparation, before the meal was warmed up.

Salmonella infections continue to occur sporadically; 39 cases were typed (30 in 1947). It is interesting that 33 were *Salmonella typhimurium*, 3 *S. bovis morbificans*, 2 *S. dublin* and 1 *S. newport*. None were of the American dried egg types, and their disappearance suggests that we have been fortunate in having no human carriers produced by the war time incidence of cases from American dried egg.

Ice Cream.

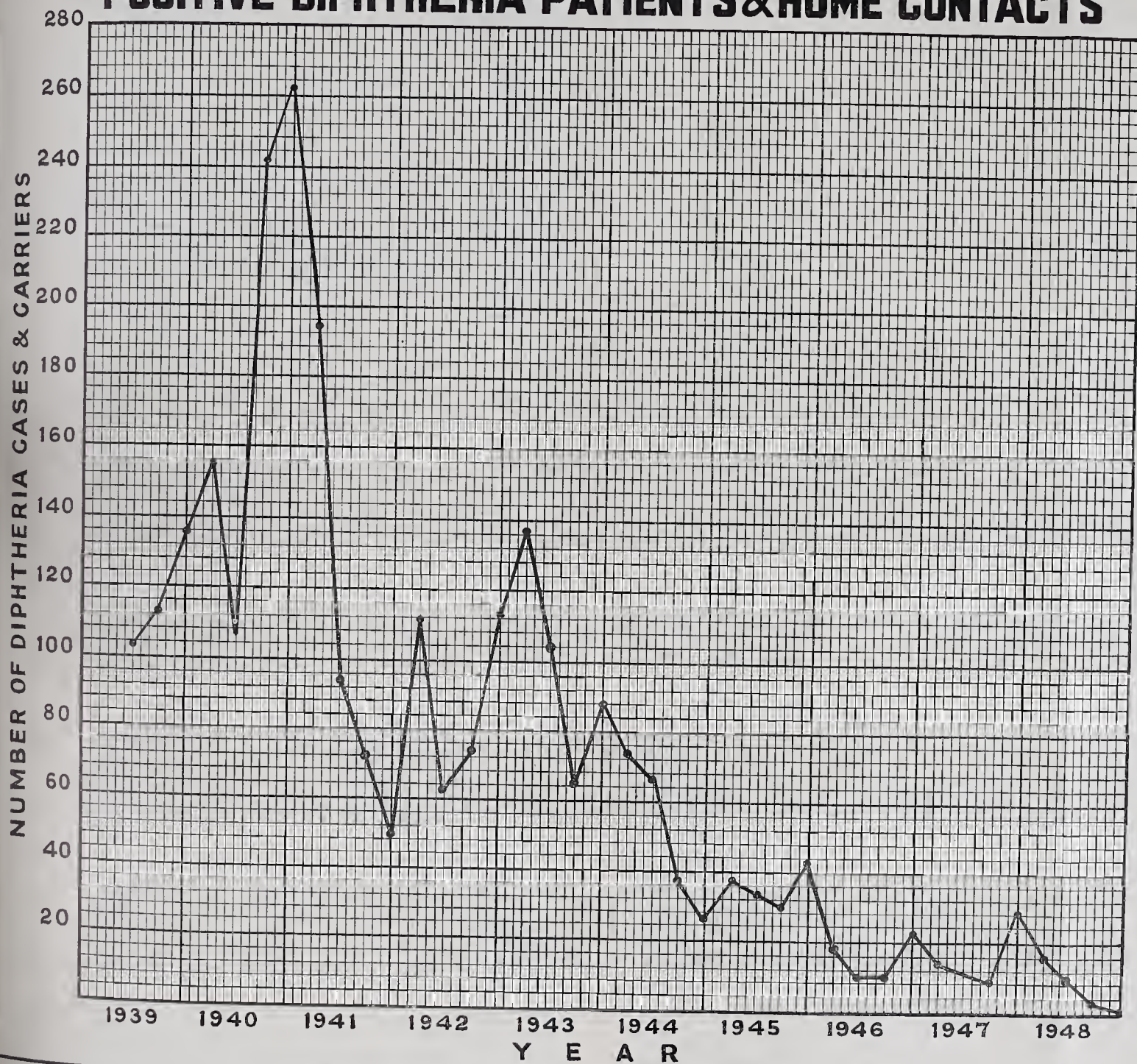
The comparison of Bristol and Ministry standards mentioned in last year's report has continued and the results for the year are given in the attached table. Discrepancies with certain ice creams which give good counts and prove to be only grade 3 or 4 by the Ministry tests still arise. The results have been summarised and discussed in an article on the "Grading of Ice Cream," published in "The Municipal Journal," April 22nd, 1949.

Milk.

The number of designations of milk, and the number of authorities requiring examinations has become so large, that we do not propose to burden this annual report with tables of results, as in previous years. Only 2% of 895 pasteurised or heat treated milks failed the official short methylene blue test. The percentage of failed phosphate tests was 1%.

LABORATORY RESULTS

POSITIVE DIPHTHERIA PATIENTS & HOME CONTACTS



Water.

One transitory occurrence of faecal organisms in a branch of the Gloucestershire main water supply necessitated chlorination of this water as it came into the city, until the company had remedied the defects. Otherwise all main water supplies in the city have been of satisfactory purity. Polluted wells and springs which are used to supply isolated houses are still detected. A table of water analysis is given.

Ministry of Health Grades	Bristol report on Count and Coli.					
	Good	Satis.	Doubt.	Poor	V.Poor	
Grade 1	74	6	2	5	0	87
Grade 2	45 135 = 31%	10 5 = 1%	3 5 = 1%	3 8 = 2%	0	61
Grade 3	76	24	9	17	9	135
Grade 4	31 148 = 34%	17 27 = 6%	18 27 = 6%	36 113 = 26%	51	153
	226 283 = 65%	57 32 = 7%	32 32 = 7%	61 121 = 28%	60	436

Waters, 1948.

	37° Count per ml.			22° Count per ml.			Presumptive B. coli/100 ml.				Faecal B.Coli.	Totals.
	0-100	100— 1000	> 1000	0-200	200— 1000	> 1000	0	1-10	10-100	> 100		
Bristol City Mains	122	0	0	122	0	0	121	1	0	0	0	122
W. Glos. Water Co.	89	3	0	87	5	0	85	7	0	0	4*	92
Portishead Water Co.	25	0	0	25	0	0	24	1	0	0	0	25
Other Glos. supplies	19	6	2	14	2	11	9	3	10	5	7	27
Other Somt. supplies	25	1	1	23	1	3	24	1	2	0	2	27
Other Bristol supplies	7	1	0	5	2	1	4	1	3	0	3	8
Miscellaneous	5	7	9	5	4	12	6	2	11	6	11	25
											27	326

* Supply chlorinated till pollution disappeared.

PREVENTIVE MEDICINE DEPARTMENT.

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Appendix III

REPORT ON THE WORK OF THE MENTAL HEALTH SERVICE SECTION.

By Dr. J. HUTTON, Senior Assistant M.O.H.

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Introduction :

The year under review has seen a notable change of organisation with the coming into force of the National Health Service Act, 1946. The Health Committee became responsible for the many functions in relation to persons suffering from mental illness and mental defect.

Mental Health Sub-Committee :

The Health Committee appointed a Mental Health Sub-Committee for the purpose of carrying out these functions.

Powers and Duties of the Local Health Authority in relation to Mental Health :

The powers and duties of the Local Health Authority relating to mental health are to be found in :—

The Mental Deficiency Acts, 1913 to 1938

The Lunacy and Mental Treatment Acts, 1890 to 1930

The National Health Service Act, 1946.

The responsibility laid on local health authorities is to formulate a scheme for a Mental Health Service providing facilities for the ascertainment of mental defectives coming within the meaning of the Acts, the supervision of such persons in their homes, or, where this is unsuitable for placing them under legal guardianship, the training and occupation of mental defectives under guardianship, their admission where necessary to institutions for care and training, securing the admission to mental hospitals of persons suffering from mental illness, the transport of patients to and from institutions, home nursing, domestic help, the prevention of illness, care and after care as it relates to those suffering from mental illness or defect.

Organisation and Establishment.

The administration of the mental health service is the responsibility of the Medical Officer of Health. He is assisted in this work by :—

Establishment :

Medical: Director—Chief Asst. Medical Officer of Health	...	...	...	1
Assistant Medical Officers (Part-time)	...	...	...	5
Administrative and Supervisory: Supervising Officer	...	...	...	1
Asst. Supervising Officers	...	...	...	2
Duly Authorised Officers	...	...	...	4
Statutory Visitors (one part-time)	...	...	...	2
Clerks	...	...	...	5
Technical: Psychologist (not yet established)	...	...	...	1
Nursing sister (part-time)	...	...	...	1
Occupation Centre Supervisor (not yet established)	...	...	...	1
Occupation Centre Assistants (one part-time)	...	...	...	6
Industrial Centre Senior Instructor	...	...	...	1
Industrial Centre Junior Instructors	...	...	...	2
Handyman Caretaker (resident)	...	...	...	1
Guides (part-time)	...	...	...	3
			Total	36

Status :

All officers, supervisors and assistants are qualified by examination or long experience to engage in their work.

Training of Staff :

To ensure that the minimum of inconvenience would be encountered in the re-arrangement of the service on the appointed day, courses of lectures were arranged for instructing officers in the legal changes brought about by the introduction of the National Health Service.

Availability of the Service :

When cases requiring action are notified to the department, investigation is carried out and arrangements made for advice or treatment being given without delay, as the service is available at all times by day or night.

Liaison with Other Departments of the Local Authority :

It would be impossible for such an organisation to function smoothly were it not for the high standard of co-operation afforded by other departments of the Corporation. The problems of mental illness and mental deficiency are closely interwoven with the social state of the individual patient, and it is truly remarkable how many departments become involved in their eventual resolution. Grateful recognition is made of the help given by the School Health Service, the Welfare Service, the Housing Department and the officers of the Court.

Liaison with Government Departments :

Our best thanks are also due to the officials of the various Government offices in the city for their help and advice in assisting with the many financial and employment difficulties peculiar to the patients.

Liaison with Other Sections of the National Health Service :

Consultants and Medical Superintendents :

Appreciation is expressed for the co-operation of consultants and medical superintendents of institutions of the Regional Hospital Board in dealing with obscure cases, and in arranging for the custody of patients presenting serious management problems.

General Practitioners :

It has been most encouraging to note the consideration shown by general practitioners in their employment of the facilities afforded by the mental health service.

Procedure :

Under the Lunacy and Mental Treatment Acts :

Information about persons who may be suitably dealt with under the provisions of the Acts generally comes from practitioners. Consultation then takes place between the authorised officer and the practitioner to decide on the most suitable method of dealing with the particular case. Should the patient require admission to a mental hospital, it is customary to advise admission as a voluntary patient, but even when difficulty is experienced in obtaining consent, certification is not resorted to without a period of observation in hospital to allow of independent assessment of the trouble, when appropriate action can be taken.

Under the Mental Deficiency Acts :

Knowledge of persons who may be subject to be dealt with under the Mental Deficiency Acts may be received from the following sources:—

- Education Department
- Regional Board Hospitals
- Children's Department
- Medical Practitioners
- Parent or Guardian
- Welfare Services Department
- Police Court
- Secretary of State (Prison).

The home of the patient is visited and a detailed social report prepared. Depending on circumstances, medical investigation of the individual is carried out, and at a case conference appropriate action is decided upon. It is of paramount importance that each case should be considered on its merits if any degree of success is to be achieved in adjusting the patient to his surroundings.

How Defectives are Protected :

Statutory Supervision: In an instance where a defective is well looked after at home, and causes no trouble to others, his case is best dealt with in this way. He is visited periodically by an officer of the department to ensure that the care being given is adequate.

It is customary to invite parents to allow such defectives to attend the occupation or industrial centre daily for training where suitable employment has not been obtained.

In smaller towns or where there are serious difficulties in bringing the defectives to a training centre, it is usual for the visitor to call more frequently and spend some time in teaching in the home.

Guardianship: For patients whose needs are not fully met by statutory supervision, but who do not require to be admitted to an institution, the method of guardianship is found to be very useful.

By court order such persons are placed in charge of a parent or guardian who is responsible for their control and custody. The Mental Health Sub-Committee can under this arrangement contribute towards the upkeep and clothing of such patients, and insist on their attending the occupation and industrial centre daily for training, or their employment in suitable occupations.

Guardianship is a satisfactory step in the liberation from institutions of patients who have served a term of training and have done well on "licence,"—a trial period spent away from such institutions.

Institutional Care: For the patient who, if not kept under strict control and discipline, would become destitute, neglected, or a danger to himself or others, institutional care—at least for a time—offers the best prospect of eventual settlement in the community.

If necessary a court order can be obtained for having the case admitted to an institution. These institutions are no longer in the hands of local health authorities, but come under Regional Hospital Board control.

Institutional life is arranged to give defectives a very full and all round training in subjects suited to their capabilities. When a suitable time has been spent there and progress is good, a patient may be licensed out into the community under conditions similar to guardianship. The mental health service frequently undertakes the supervision of these cases in their situations, reporting regularly to the parent institution on their progress.

And so, by a series of graduations, a patient is rehabilitated into normal community life.

If at any time a relapse occurs it is usually found necessary to return a patient for further institutional training.

Shortage of Places in Institutions:

The mental health service has experienced difficulty in finding institutional accommodation for all of the young trainable defectives brought to notice, and it is earnestly hoped that additional places will be provided as soon as possible for the benefit of the community as well as that of the patients who cannot be adequately cared for at home or otherwise than in an institution.

After Care for Defectives and those who have suffered from Mental Illness:

With the passage of time a system of friendly supervision has been introduced to meet the needs of defectives discharged from control, and patients who in the past have suffered from mental illness of any kind. By this method help and advice can be given in solving the many problems which beset these patients in their daily affairs, and in preventing a relapse of their former troubles.

Occupation and Industrial Centre:

At Marlborough House, centrally situated in the city, there has been set up a training centre for mental defectives of all ages.

Accommodation and need for expansion: There is accommodation for 100 pupils, but the demand for such training has been so great that the accommodation is now seriously overtaxed. There are 120 pupils on the roll with an average daily attendance of 97; moreover, in order to off-set the general shortage of places in institutions, more patients have had to be placed under guardianship with daily attendance at the occupation centre.

It is essential that steps be taken as soon as possible to increase the accommodation of the centre to about 400 places, so that all who are in need of this training may benefit.

Curriculum: The subjects taught in the centre cover a wide field and include:—

- Handwork
- Speech training
- Music and dancing
- Art
- Physical training

Organised games
Habit and domestic training
Needlework
Woodwork
Gardening and pets
Boot repairing.

Exhibition of Work: The high standard of the handicrafts and musical activities achieved by the pupils has been very evident in the successful "open days," concerts, and sales of work held during the year.

Interest and Co-operation of Parents: A highly successful parents' meeting was held in December, when it was decided to form a Parent-Teachers' Association, so that the children may benefit further in the home as well as in the centre, by the parents having the advantages of easy access to the members of the staff, lectures and advice.

Serving of Milk and Meals: Pupils are eligible for the issue of free milk as for school children, and a mid-day meal prepared by the education authority's catering establishment is served at a nominal charge.

Medical Supervision: Regular and frequent visits are made to the centre by a health visitor who, under the direction of a medical officer, conducts health inspections on the children.

All of the older members attending the centre are mass x-rayed annually to ensure freedom from tuberculous disease of the lungs. Immunisation for diphtheria is available at the many clinics throughout the city, and parents are encouraged to have their children protected.

Transport:

While some parents bring their children to the centre daily, and others are capable of coming by themselves, there are many who, for various reasons of distance or physical disability require transport, which is provided by the Corporation. Guides are employed to accompany the conveyances, and so ensure the safety of the pupils in transit.

The Council's ambulance service provides adequate transport to and from hospitals and institutions for persons suffering from mental illness and mental defect.

Attendants for ambulance cases are generally provided by the hospitals concerned, while those required for sitting cases as a rule are supplied by the mental health service.

Statistics :

Lunacy and Mental Treatment Acts:

During the period 5th July, 1948, to 31st December, 1948—(six months only):—

1. Removal Orders effected by the authorised officers	...	...	...	166
2. Number of patients certified	...	...	...	76
3. Cases admitted as voluntary patients	...	...	...	612
4. Cases admitted as temporary patients	...	...	...	9
5. Other cases dealt with other than under the provisions of the Lunacy and Mental Treatment Acts	...	...	...	73
Total				936

Mental Deficiency Acts:

The number of defectives ascertained as subject to be dealt with under the Mental Deficiency Acts in the course of the year ended 31st December, 1948, total 73.

Information in respect of these cases was received from the following sources:—

Local Education Authority	54
Medical practitioners	2
Miscellaneous	13
Charged with offences before a Court of Criminal Jurisdiction (Section 8)	4
Total	73

Transfer of Responsibility on the Appointed Day:

On the 5th July, 1948, 674 cases in institutions previously under the care of the Local Authority were taken over by Hospital Management Committees of the Regional Hospital Board, leaving 835 cases under the care of the Local Health Authority on the 31st December, 1948, as follows:—

	<i>Males</i>	<i>Females</i>	<i>Total</i>
Cases under Guardianship	66	91	157
„ „ Statutory supervision	366	282	648
„ „ Voluntary supervision	4	4	8
„ Pending	11	6	17
„ Awaiting vacancies in Institutions	4	1	5
Total	451	384	835

Note:—These figures exclude 357 children on the registers of the Council's special schools for educationally sub-normal children, who, in the future, may have to be dealt with under the provisions of the Mental Deficiency Acts.

Discharges:

The number of mental defectives discharged in the course of the year ended 31st December, 1948 was:—

By Authority of the Board of Control	7
By "operation of law"	1
From statutory supervision by Local Health Authority	79
Total	87

Deaths:

Number of defectives who died while under guardianship	2
Number of defectives who died while under supervision	4
Total	6

Social After-Care (5th July—31st December, 1948):

	<i>Males</i>	<i>Females</i>	<i>Total</i>
Discharged mental defectives	30	68	98
Ex-service personnel referred by regional hospital boards	7	—	7
Psychiatric cases referred from mental hospitals	2	1	3
	39	69	108

Officers of this department also work in close co-operation with psychiatric social workers attached to the local mental hospitals in providing after-care for patients on trial. Full use is made of the psychiatric out-patient clinic, situated at the Bristol Royal Infirmary.

I wish to express my sincere thanks to Mr. F. Morton, supervising officer of the mental health service section, for having supplied me with the statistical material embodied in this report.

Appendix IV

PORT HEALTH SERVICES.

Medical Inspection and Sanitary Circumstances.

By Dr. D. T. RICHARDS, Chief Assistant Port Medical Officer.

This Report is prepared, as in pre-war years, on the lines indicated in a memorandum issued by the Ministry of Health to Port Health Authorities (Memo. 302/S.A.).

The narrative is referenced where appropriate to statistical tables in Appendix IX, pages 126-169.

I. Vessels entering the Port during the year (see Table, page 159).

Activity at the port has been well maintained during 1948. The tonnages of imported and exported cargoes and the number of foreign-going arrivals both indicate that a greater volume of trade has passed through the port than at any time since the end of the recent war. Comparative figures are as follows:—

Year	Avonmouth & Portishead	Bristol City	Total
1946	428	137	565
1947	492	216	708
1948	624	272	896

Each vessel was inspected on arrival and subjected to established precautionary measures while in port. Four hundred and ten vessels arrived from, or had called at, ports or seaboard included in the list of infected ports published weekly by the Ministry of Health, and 111 were from plague infected ports.

No major infectious illness entered the port during the year, but careful supervision of passengers and crew has continued. The port medical officers dealt with 37,325 passengers and crew, of whom 661 were referred to hospital, clinic or private doctor for treatment or observation.

II. Foreign Ports from which vessels arrive.

Algeria	...	...	Arzew, Oran, Sousse.
Argentina	...	...	Bahia Blanca, Buenos Aires, La Plata, Rosario, San Lorenzo, San Nicholas, Zarete.
Australia	...	...	Adelaide, Brisbane, Bunbury, Fremantle, Geelong, Hobart, Mackay, Melbourne, Newcastle, Port Alfred, Port Kembla, Port Pirie, Sydney, Townsville.
Belgium	...	...	Antwerp, Ghent, Ostend.
Brazil	...	...	Rio Grande, Rio de Janeiro.
British West Indies	...	...	Kingstown, Port Antonio, St. Vincent, Trinidad.
Burma	...	...	Moulmein, Rangoon.
Canada	...	...	Campbellton, Halifax, Montreal, Port Arthur, Port Churchill, Quebec, St. John Sorel, Three Rivers, Vancouver.
Cape Verde Islands	...	...	St. Vincent.
Ceylon	...	...	Colombo.
Cuba	...	...	Guantanamo, Havanna.
Cyrenaice	...	...	Tripoli.
Denmark	...	...	Horsens.
Egypt	...	...	Suez.

Foreign Ports from which vessels arrive—contd.

Finland	...	...	Abo, Hango, Helsinki, Kotka, Lovisa, Mantyluoto, Rafso, Valkon, Walkom.
France	...	...	Arromanches, Bayonne, Bordeaux, Boulogne, Caen, Charente, Cherbourg, Dieppe, Deauville, Dunkirk, Nantes, Nemours, Rouen, Trouville.
French Cameroons	...	...	Duala, Tiko Island.
French Equatorial Africa	...	...	Port Gentil.
French Morocco	...	...	Casablanca.
Gambia	...	...	Bathurst.
Germany	...	...	Bremen, Bremerhaven, Cuxhaven, Emden, Hamburg, Lubeck, Stettin, Wismar.
Gold Coast	...	...	Accra, Freetown, Takoradi.
Greece	...	...	Patras.
Iceland	...	...	Siglufjord.
India	...	...	Bombay, Calcutta, Chittagong, Madras, Vizagapatam.
Iran	...	...	Abadan, Busreh, Hormuz, Ormuz.
Italy	...	...	Genoa, Leghorn, Messina.
Jugoslavia	...	...	Fiume.
Kenya	...	...	Mombassa.
Madeira	...	...	Funchal.
Malta	...	...	Valetta.
Mexico	...	...	Caripito, Tampico.
Netherlands	...	...	Amsterdam, Delfzyl, Horlingen, Rotterdam.
Netherlands West Indies	...	...	Aruba, Curacao.
New Zealand	...	...	Auckland, Bluff, Napier, Port Chalmers, Wellington.
Nigeria	...	...	Lagos, Sapele.
Norway	...	...	Bergen, Larvik, Oslo, Skien.
Palestine	...	...	Haifa, Jaffa, Tel-Aviv.
Persian Gulf	...	...	Bahrein Island, Ras Tanura.
Portugal	...	...	Faro, Leixoes, Lisbon, Oporto, Villa Real.
Portuguese East Africa	...	...	Beira, Laurengo Marques.
Rumania	...	...	Constanza.
Southern Nigeria	...	...	Lagos, Warri.
Spain	...	...	Bilbao, Cadiz, Centa, Gandia, Pasages, San Feliu, Santander, Seville, Valencia.
Sudan	...	...	Port Sudan.
Sweden	...	...	Burea, Gefle, Goteborg, Gothenburg, Gruvon, Halmstad, Hernosund, Horneborg, Hudiksvall, Iggesund, Kramfors, Munksund, Ornskoldsvik, Rundvik, Stocka, Stutskar, Trelleborg, Uddevalla.
Tunisia	...	...	Sfax.
Turkey	...	...	Istanbul, Izmir.
Uruguay	...	...	Montevideo.
United States of America	...	...	Baltimore, Baton Rouge, Beaumont, Charleston, Corpus Christi, Coos Bay, Galveston, Houston, Lake Charles, Los Angeles, New Orleans, New York, Norfolk, Philadelphia, Port Sulphur, Texas City, Wilmington.
Union of Soviet Socialist Republics	...	...	Archangel, Batum, Nicolaieff, Novorossisk, Odessa, Tuapse.

III. Water Supply.**(1) Source of supply for:—****(a) The Port.**

Water, supplied by the Bristol Waterworks Company, is available to all premises in the dock area.

(b) Shipping.

Fresh water mains, carrying the Bristol Waterworks supply, are laid on to the quayside berths.

(2) *Hydrants and hosepipes. What precautions are taken against contamination?*

Standpipes and hoses, used to convey water from the quayside mains to ships, are regularly flushed out and cleansed. Water is allowed to run free for a few minutes before being delivered to the ship's tanks. Samples are periodically submitted for chemical and bacteriological analysis.

(3) *Number of water boats and their sanitary condition.*

Only one water boat is available and this is used at the city docks. The port health inspector periodically examines this boat, and supervises when cleansing and cement washing become necessary.

IV. Port Health Regulations, 1933 and 1945.

(1) *Arrangements for dealing with Declarations of Health.*

Under a local arrangement with the Pilotage Board, declaration of health forms are handed to the master by the channel pilot in the Barry Roads. In most cases, these forms are completed for delivery to the health inspector boarding the vessels on arrival.

(2) *Boarding of vessels on arrival.*

All vessels, coastwise or from foreign, are boarded at the locks on arrival by the health inspector on tidal watch. All vessels from foreign, and all vessels reporting sickness which arrive from foreign via a coastal port are boarded by the medical officer. "Infected" or "suspected" ships are boarded by the medical officer and health inspector at Walton Bay from a tug chartered for this purpose.

(3) *Notification to the Authority of inward vessels requiring special attention (wireless messages, land signal stations, information from pilots, customs officers, etc.).*

Wireless messages are relayed to "Portelth," Bristol, if there is any circumstance on board requiring the attention of the medical officer, giving the name of the ship and the expected time of arrival. These messages are forwarded from the central health clinic to the port medical officer and the senior port inspector for appropriate action. Visual signals for transmission to the port medical officer may also be directed to the land signal station at Walton Bay. In addition, masters of foreign-going ships approaching the port are required to hoist whichever of the quarantine signals is appropriate as set out in the 1931 International Code of Signals for visual signals.

(4) *Mooring stations, designated under Article 10.*

(a) *Inner mooring stations.*

Avonmouth	...	(a) Royal Edward Dock—North Wall.
		(b) Old Dock—Dolphin Buoy.
Bristol	...	Railway Wharf.
Portishead	...	No. 1 Shed.

(b) *Outer mooring station.*

Avonmouth, Bristol and Portishead Docks—Walton Bay.

(5) *Particulars of any standing exemptions from the provisions of Article 14.*

There are no standing exemptions at this port for the reasons indicated in section (2) above.

(6) *Experience of working of Article 16.*

Unauthorized boarding is kept to a minimum at this port, but it is to be stressed that this is largely due to care and watchfulness on the part of the inspectorial staff: ships' masters, as previously reported, take very few steps to secure compliance with the provisions of Article 16 (i) of the regulations. Boarding by officials of the shipping company, from a cutter at the Barry Roads, occurred on two occasions. The Barry Roads are outside the jurisdiction of the Bristol Port Health Authority, and the individuals concerned were on each occasion treated as passengers arriving, being thereby liable to control under the measures prescribed by the regulations: nevertheless steps were successfully taken during the year, in conjunction with the Barry Port Health Authority and H.M. Customs and Excise officials, to abolish this practice.

(7) *Arrangements have been made for:—*

(a) *Premises and waiting rooms for medical examination.*

All reported cases of sickness among crew and passengers are examined on board at the time of arrival. Crew and passenger inspections are completed on board shortly after reaching berth. Adequate accommodation, if a detailed examination is required for any other purpose under the regulation, is available in the medical inspection room of the new Port Health Office, constructed in 1943.

(b) *Cleansing and disinfection of ships, persons and clothing and other articles.*

The cleansing and disinfection of infected ships' quarters is carried out under the supervision of the inspectorial staff whenever necessary, using the appropriate disinfectant. Clothing, bedding and other articles are removed by van and treated by steam under pressure at the city disinfecting station. The cleansing of persons is provided for at the city cleansing station.

(c) *Premises for the temporary accommodation of persons for whom such accommodation is required for the purposes of the regulations, and*

(d) *Hospital accommodation available for plague, cholera, yellow fever, small-pox and other infectious diseases.*

Patients suffering from infectious disease, and all cases requiring observation are removed to the isolation hospital at Ham Green.

(e) *Ambulance transport.*

This is provided for by the city ambulance service.

(f) *Supervision of contacts.*

Inspectors make daily visits to all vessels in port which have arrived from or called at infected or suspected ports and secure a signed report concerning the health of the crews from the officer-in-charge. On arrival, destinations of passengers and crew are also obtained as a routine in respect of these ships. Any sickness developing after arrival is thus brought immediately to the notice of the medical officer. When surveillance is required, forward notices, giving the appropriate information, are posted to the medical officers of health of the districts to which contacts proceed after leaving the ship.

(8) *Arrangements for the bacteriological or pathological examination of rats for plague, and*

(9) *Arrangements for other bacteriological or pathological examinations.*

All pathological and bacteriological examinations are conducted at the Preventive Medicine Laboratories at Canynge Hall. Rats from vessels and quays are systematically examined for evidence of plague. Water samples from hydrants or ships' tanks, and articles of food are examined chemically and bacteriologically when the occasion demands.

(10) *Arrangements for the treatment of the venereal diseases.*

Full information concerning the situation and giving the hours during which the medical officer is in attendance at the venereal disease centres at Avonmouth and at Bristol Docks, is given to the crew of every vessel entering the port. This information is contained in handbills, printed in several languages, which are freely distributed to each ship. When necessary, in-patient treatment under the direction of the venereal diseases consultant, is available at the Frenchay General Hospital.

Extensive propaganda, commenced during the war years, is still carried out at this port. The arrangement whereby the assistant port medical officers, who are usually the first to ascertain venereal conditions, act in an additional capacity as medical officers to the venereal disease centre, has continued. This arrangement has worked satisfactorily. A high proportion of the Avonmouth shipping arrivals are of the tanker class, and many of these discharge and again sail within twelve hours of docking. Medical attention at the time of arrival, such as may only be provided under the above mentioned arrangement, is therefore available without delay.

The following table relates to seamen treated at the Avonmouth centre during the years 1944—1948. It will be seen that there has been little significant change in the incidence of syphilis; but a continued slight rise in the incidence of gonorrhœa is to be discerned. Taking into account the increase in shipping arrivals during the past three years, it may be presumed that there has been an over-all reduction in the incidence of the venereal diseases amongst seafarers at this port.

Year	Syphilis	Soft Sore	Gonorrhœa	Non-V.D.	Total
1944	154	19	159	311	643
1945	85	26	150	261	522
1946	67	27	254	291	639
1947	60	17	271	252	600
1948	77	20	298	179	574

(11) *Arrangements for the interment of the dead.*

Deaths occurring during a voyage, or in port, are fully investigated by the medical officer, and, when infectious disease has been excluded, arrangements for the transference of dead to the city mortuary, and subsequent interment, are made by the ships' agents.

(12) *Other matters, if any, requiring attention.*

There are no other matters arising out of the regulations which require attention.

V. Measures against Rodents.

(1) *Steps taken for detection of rodent plague.*

(a) *In ships in the port.*

During the period under review all ships from foreign, and a high percentage of coastwise vessels, were examined for evidence of rat activity.

These measures commence on arrival. The undisturbed surface of the cargo is examined prior to the commencement of discharge, thus providing early and valuable evidence of the condition of the vessel with regard to rat infestation. A thorough examination for signs of rat activity is continued during the time the cargo is being discharged.

Eighteen foreign-going and one coastwise vessel were found infested either to a moderate or pronounced degree. Six of the former, in which 142 rats were trapped, were destined with part cargoes for other United Kingdom ports. The appropriate port health authorities were advised by forward notice, and in each case fumigation was carried out when discharge of cargo was completed.

The remaining thirteen ships were fumigated at this port with hydrogen cyanide, and granted deratisation certificates. One of these vessels was infested with mice only: 373 being recovered after fumigation. The highest total of rats recovered from any one ship during the year was 185.

The known total of rats destroyed in ships by trapping and fumigation was 1,012; and 566 (56%) of these were examined at the Department of Preventive Medicine and found to be free from plague infecting organisms.

The number of deratisation and deratisation exemption certificates issued during the year were 25 and 133 respectively.

(b) *On quays, wharves, etc.*

A total of 755 rats, compared with 1,601 in the preceding year, were recovered by poisoning or trapping during 1948. These were made up of 313 brown and 442 black rats. Of the total, 402 (53%) were sent to the Department of Preventive Medicine for examination: none was found to be harbouring infective organisms.

It is to be reported that trapping as a means of extermination was suspended on 1st May, 1948, and that this method was superseded by methods involving pre-baiting and poisoning only. An accurate estimate of rats recovered during the last seven months of the year cannot therefore be given, since the recovery of all rats killed by poisoning is very difficult, and often impossible.

During the latter part of the year measures of repression were carried out according to recommendations made by the Ministry of Agriculture and Fisheries. The dockside was divided into convenient areas which were treated in rotation. In the early stages the results, judged from the number of poison baits consumed, were reasonably good; but subsequent "takes" were disappointing, although the harmless pre-baits were readily consumed. This fact, coupled with continued evidence of rat activity, led to the belief that there was no appreciable diminution in the number of rats in the areas under consideration. The local representatives of the infestation branch of the Ministry was consulted with regard to the advisability of reverting to trapping: various sites were inspected and it was agreed that trapping should be resumed, but that it should alternate periodically with treatment by poison. Although it is not desired to deprecate the latter method of exterminating rats it is nevertheless significant that during 14 days in December, 1948, 125 rats were trapped in the areas that had previously been treated with poison baits.

In the annual report for 1947 it was mentioned that black rats were confined to certain areas within the dock at Avonmouth. Comprehensive surveys conducted during the year have indicated that they are now more widespread, having extended their activities to buildings previously free from this species. This is, to some extent, borne out by the fact that 129 more black rats than brown rats were destroyed during the period. It would appear that the former are now in the ascendancy, whilst the brown rat is less common each year; and that we are fast approaching a complete reversal of conditions which prevailed less than ten years ago, when the brown rat was predominant.

Contributing to this state of affairs, and giving cause for some concern, are the means by which rats reach the shore from ships in port. In a few instances they have been found to be nesting in bagged cargoes of animal food. When the bags are discharged to the sheds, signs of rat activity are soon found. A careful and continuous watch is kept when such cargoes are found in this condition, and the port authority is advised of the need to inspect the bags before they are transferred to stores. Cargoes of this type are ideal rat harbourages and there is little doubt that they originally become infested whilst accumulating in the storage depots of the exporting countries.

Again, ship rats are occasionally drawn into the elevator suction pipes when bulk cereal cargoes are being discharged. They are sucked into the pipes, thrown on to the granary conveyor belt and, after many hazards, eventually reach the granaries. There is need for some device which would either prevent the rats being drawn into the pipes or being thrown on to the belts. One suggestion was that an inch mesh metal cage be fitted around the base of the suction pipe or that a similar screen be fitted at some convenient point in the elevator; but technicians who were consulted were of the opinion that such fittings, owing to continual blockage, would interfere with the efficiency of the plant and greatly reduce the rate of discharge. Without doubt there is need for some method whereby the vermin can be prevented from leaving the ships, where they are more easily and effectively destroyed.

(2) *Measures to prevent the passage of rats between ships and shore.*

- (i) All vessels from infected or suspected ports are required to attach efficient rat guards to the mooring ropes.
- (ii) Suitable lengths of tarred hessian are wrapped around moorings, outside the leads, where the standard types of rat guards are not available.

(3) *Methods of deratisation.*

(a) *On ships.*

Fumigation with hydrogen cyanide gas is always recommended. During the year, all vessels requiring fumigation were treated with this method.

(b) *Premises within the vicinity of docks or quays.*

In all premises where rat activity is discovered frequent pre-baiting, poisoning and trapping is carried out.

(4) *Measures taken for the detection of rat prevalence in ships and on shore.*

As outlined in (1) (a) above, routine inspection is made for signs of rat activity on the undisturbed surface of cargoes prior to discharge. Follow up inspection, including sprinkled sand tests, are subsequently carried out. On shore, regular inspection of all premises and waste ground is made, particular attention being given to premises where foodstuffs are stored.

(5) *Rat-proofing.*(a) *To what extent are docks, wharves, warehouses, etc., rat proof?*

The majority of docks, wharves, warehouses and private establishments within the dock area are of efficient rat-proof construction.

(b) *Action taken to extend rat-proofing.*(i) *In ships.*

When rat-proofing could effectively be carried out without extensive structural alterations, the owners were recommended to do this work. In many ships, rat-proofing was found to be particularly necessary in respect of provision storerooms. In each case, the recommendations were complied with.

(ii) *On shore.*

Whenever structural alterations were made to existing buildings, steps were taken to ensure that effective rat-proofing was incorporated. All new constructions during the year were similarly dealt with.

Hygiene of Crews' Spaces.

During the year 3,353 visits and revisits were made to foreign-going, and 1,596 to coastwise vessels. Details are tabulated in pages 165-167.

(a) *Defects of dirt, vermin, and other nuisance causes.*

739 dirt, vermin, and other nuisances were found in 255 British, and 56 in 29 foreign owned ships. The number of vermin infestations was encouragingly low. Most were to a moderate degree only.

An encouraging trend in port health work is the greater frequency with which information is now exchanged between the various port health authorities. An example of this is the increase in the number of notifications from other ports concerning nuisances or defects in crews' quarters, which, in view of the time factor, or for some other reasonable cause, have not yet been remedied. This is of the greatest importance. It will lead to greater efficiency within the port health service, and will eventually result in higher standards of maintenance and hygiene within the merchant navy.

The unsatisfactory state in which accommodation is left by seamen at the termination of a voyage has given rise to concern at all ports. It appears that we are more fortunate at Bristol than at some of the ports regarding the availability of labour to cleanse and paint accommodation after ratings have been discharged. No difficulty has been experienced here in this respect, and a squad of men or women are employed for this work. Occasionally their tasks are unpleasant as they have to clear up a voyage accumulation of dirt and filth.

Shipowners are thus involved in a considerable amount of unnecessary expense, which could be well avoided if seamen recognised their responsibilities in this direction. Seamen insist upon cleanliness, and a satisfactory state of repair, when they join a ship. Unsatisfactory and avoidable conditions would soon disappear if they were as determined in their endeavour to ensure that their successors would find the accommodation in a reasonably similar state when "signing on." Another remedy might be the introduction of disciplinary measures. These might at the outset cause a certain amount of inconvenience to the masters and officers concerned, but would be well worth a trial. If signing off, for example, could be delayed until the men fulfilled their obligations, the desired result would quickly be obtained.

(b) *Defects of wear and tear.*

Of the 236 defects of this nature—found in a total of 81 ships—all but six were remedied at this port. Forward notices concerning the remainder were sent to the appropriate port health authorities, and replies confirming that the necessary repairs had been carried out were subsequently received in each case.

(c) *Defects of original construction.*

Thirteen British ships, with 56 defects of original construction, were dealt with during the year. In each instance the Ministry of Transport surveyor was notified either informally or by letter. The accommodation was below standard in respect of three of these vessels. Two of these proceeded to other ports in the United Kingdom, where the whole of the accommodation was re-arranged to comply with present day designs. An extension was granted by the Ministry of Transport in respect of

the third, so that the alteration to the accommodation should coincide with the general survey; but in the meantime the owner was called upon to carry out a considerable amount of work to remedy existing defects, provide new w.c. and washing facilities, and messroom accommodation for the firemen.

Defects found in the remainder of the ships, such as heating, ventilation and lighting, were remedied at this port prior to the vessels' departure.

Dock Sanitation.

(a) Factories and Workplaces (General).

A slight easing of the supply situation in building material, and an increase in the amount that can be spent without the need of a licence has in some instances provided an opportunity to renovate, and where necessary modernise and increase the sanitary, washing and messroom facilities for employees in factories within the dock.

Periodic inspections have been carried out during the year, and, with a few exceptions, conditions as to cleanliness and repair have been satisfactory. When the need arose, informal action sufficed to obtain compliance with requests for the abatement of nuisances, the remedy of defects, disrepair and uncleanness.

(b) Canteens.

Private and Port Authority canteens on the dock sites and at Chittening have been subject to regular inspections. The fact that during the year no complaint was received, and that only minor items of repair and cleansing required attention, is an indication of the satisfactory manner in which these establishments are supervised and maintained.

(c) Public Conveniences.

At the request of the National Dock Labour Board a survey was made, and a detailed report submitted to them covering all public conveniences at the City, Avonmouth and Portishead Docks. The report showed that the majority of the conveniences are of a modern type, kept in a good state of repair, and cleansed daily. Reference was made, however, to the extra accommodation required on the west side of Avonmouth Dock, and to the need of more modern conveniences on two sites on the Royal Edward Dock. Further, it was recommended that having regard to the state of disrepair of the existing native type closet a new one should be constructed for the exclusive use of native seamen in ships occupying the dry dock.

With regard to the City Docks, the report stated that with the construction of new conveniences at F and R sheds, and at Princes Wharf, to replace those destroyed by enemy action, these docks will be well provided with suitable and sufficient conveniences.

The conveniences at Portishead, constructed since the war, are considered adequate to meet the needs of that dock on the basis of current shipping activity.

(d) Refuse Collecting.

In general good co-operation has been given by ships' officers, who have made full use of the ship refuse bays provided at the various berths.

<i>No. of routine visits to:</i>				
<i>Premises in Dock Area</i>	<i>Dock Sanitation</i>	<i>Public Conveniences</i>	<i>Tip</i>	<i>Salvage Dumps</i>
1,577	747	872	103	1,134

The volume of both domestic and trade refuse has again been high, and the clearance of deposits by the cleansing department—involving the constant use of two lorries—has been carried out with a minimum of delay.

(e) Chittening Estate.

With the exception of one small block, all the buildings are now occupied by one or other of the seventeen firms operating on the Chittening Estate. The types of industry vary considerably, and range from engineering and typesetting to food manufacture and storage.

The need for separate sanitary and washing accommodation for each firm was mentioned in last year's annual report and this important requirement has been the subject of further discussions both with the representatives of the Port of Bristol Authority, who are the owners of the estate, and the firms concerned. Progress in this direction has been made in premises occupied in sections A, B and C, and it now remains for only three firms to complete arrangements for the provision of their own sanitary facilities.

Employees of firms occupying premises in section D are still called upon to use the communal W.C. and wash place in proximity to this section. The necessary plans have been prepared by the individual firms, but further progress depends upon the installation of drains for this area. New drainage installations are part of an extensive scheme of alteration and improvement which is now in progress, and it is anticipated that the former will be constructed during 1949.

Frequent visits have been made to all the factories on the site and items relating to hygiene and sanitation have been dealt with satisfactorily.

Inspection of Imported Meat and Other Foods (see table, Appendix IX, page 156).

Total imports of food for human consumption were higher than in 1947, due chiefly to a considerable increase in the quantity of grain cargoes discharged. The remaining commodities, with the exception of fresh fruits, showed a reduction. Frozen meat, canned meats and cheese were down by 28,125, 21,036 and 20,627 tons respectively. The reduction in the first two commodities was due in the main to fewer shipments from the Argentine.

Such matters as the hygienic handling and transportation of food cargoes received the merited attention of the inspectorate and routine percentage examinations were undertaken.

The bulk of food imported is still to the account and under the control of the Ministry of Food. However, there has been a relaxation in respect of some food commodities, and a few private consignments have been inspected during the year. Whenever necessary, the requirements of the appropriate regulations have been complied with when detaining such consignments or portions thereof for sampling or condemnation.

Disposal of over-ripe bananas, fit for immediate consumption, but not suitable for distribution via the ordinary trade channels, was carried out as in former years. Over 30,000 lbs. of this fruit was made available to various hospitals in the city for consumption by children, as a result of the kind assistance and co-operation of representatives of the Ministry of Food and Messrs. Elders & Fyffes.

Caseous Lymphadenitis.

In August we were provided with an opportunity to inspect the first consignment of Argentine sheep and lamb carcasses to be discharged at Avonmouth Docks under the amended Imported Food regulations which came into force in May.

This amendment excludes mutton and lamb from the provisions of the regulations which prohibit the importation of meat from which a lymphatic gland has been removed; and as it was introduced primarily to allow the importation of mutton and lamb from which caseous glands had been excised in the country of origin, a very careful examination of the complete consignment of sheep was carried out. A high percentage of the lamb consignment was also examined.

The total consignment of sheep amounted to 5,913 carcasses so treated, and of these 191 were found to have additional caseous glands. A further seven had abscesses in the muscle tissue, making a total of 198, or approximately 3.3% of the consignment.

The following figures relate to the incidence of infection in the various carcass lymphatic glands:—

Prescapular	...	107	Supramammary	...	4
Precrural	...	34	Lumbar	...	3
Iliac	...	31	Popliteal	...	1*
Presternal	...	23			

* The popliteal gland was incised only when either the iliac or precrural gland was found to be affected.

Infection of the prescapular gland was most common, and the figure accounts for 53% of the total number of all diseased glands.

In a further 162 carcasses, or 2.7% of the consignment, portions of lung tissue containing abscesses were found to be adherent to the chest wall.

The foregoing figures thus show that 353 carcasses, equivalent to 6% of the consignment had caseous infection either in the carcase or the retained visceral tissue.

A comprehensive report was drawn up and forwarded to the Ministry of Health. In this report, unsatisfactory methods of dressing and inspection of the carcasses in the country of origin was stressed, and attention was drawn to the comparatively high percentage of diseased glands and offal tissue discovered. Mention was also made of the need to provide the port health authority with all relevant information concerning the intended arrival of future shipments of this nature.

Up to the end of the year only two further consignments from the Argentine, totalling 630 sheep and 28,637 lambs were discharged at Avonmouth Docks. Three caseous glands only were discovered in the sheep. None was found during a high percentage examination of the lambs. It was noted, however, that some of the sheep had one or more glands removed, but the meat was of good quality and the general condition of the carcasses both with regard to dressing and inspection was quite satisfactory.

Food Sampling.

During the year various samples of imported foodstuffs were submitted to the bacteriologist and to the city analyst for specialist examination. Details are given in the tables. Further comment is called for in only three cases, namely:—

1. *Hungarian Apricot Pulp*: In each of the seven samples taken the sulphur dioxide content was in excess of the amount permitted under the Preservatives in Food Regulations. The Ministry of Food was informed and arrangements were made for an allocation of tinned apricot pulp to be blended in order that the final product would comply with the regulations. Forward notices were sent in each case to the medical officers of health of the areas receiving this product.
2. *Australian Pears*: Seven samples were taken, and three of these were reported to have an excess tin content. The remainder were found to be in good condition, but there was evidence of early attack by the fruit juices, and in consequence rapid disposal of the consignment was advised. A joint survey with the Ministry of Food representative was carried out and the sound part of the consignment was allocated under supervision to canteen and catering establishments to avoid delay in consumption.
3. This consignment was landed at Cardiff ex s.s. "Gartwood." Part of this shipment was allocated to a Bristol firm. Following an unfavourable report from the medical officer of health, Cardiff, six samples, taken at Bristol, were also found to have excess copper content. The importers were therefore called upon to re-export the whole consignment.

Public Health (Cleansing of Shellfish) Act, 1932.**Public Health (Shellfish) Regulations, 1934.**

There are no shellfish beds or layings within the jurisdiction of the Bristol port health authority. The supply of shellfish marketed in Bristol is obtained mainly from the following sources:—

Cockles from St. Clair, South Wales, and King's Lynn, Norfolk.

Escallops from Brixham, South Devon.

Mussels from Appledore, North Devon; and St. Clair, South Wales.

Oysters from Cornwall, others from Thames Estuary and Continental countries via London.

Winkles from Appledore, North Devon.

Whelks from King's Lynn, Norfolk.

Samples of Food examined by Bacteriologist and Analyst.

<i>Quantity Submitted</i>	<i>Description of commodity</i>	<i>Examined for</i>	<i>Result</i>
1 x 7 lbs. tin	Dried Apricots	Preservatives	Satisfactory
1 x 6 lbs. tin	Corned Beef	Purity	Satisfactory
7 x 8 oz. jars	Hungarian Apricot Pulp	Preservatives	Unsatisfactory Excess SO ₂ in all samples
5 x 16 oz. tins	Australian Tomato Puree	Mineral Content	Satisfactory
1 x 16 oz. tin	S. African Tomato Puree	Mineral Content	Satisfactory
3 x 8 oz. jars	Spanish Apricot Pulp	Preservatives	Satisfactory
2 x 8 oz. jars	Spanish Apricot Pulp	Mineral Content	Satisfactory
7 x 16 oz. tins	Australian Pears	Purity	3 unfit for food 4 satisfactory
3 x 16 oz. tins	Australian Beet in Vinegar	Metallic contamination	Satisfactory
1 x 16 oz. tin	Australian Tomato Puree	Mineral Content	Satisfactory
1 x 30 oz. tin	Australian Green Beans	Preservatives	Satisfactory
3 x 16 oz. tins	Australian Tomato Puree	Preservatives	Satisfactory
1 x 8 oz. jar	Australian Tomato Sauce	Preservatives	Satisfactory
3 x 5½ oz. tins	Argentine Potted Meat	Purity	Satisfactory
3 x 30 oz. tins	Italian Canned Tomatoes	Metallic contamination	Satisfactory
6 x 16 oz. tins	Italian Tomato Paste	Metallic contamination	Excess Copper: unfit

Parrots (Prohibition of Import) Regulations, 1930.

During the year, five vessels arrived with thirteen birds of the parrot specie on board. Importation was prohibited under the regulations.

Medical Inspection of Aliens (see Table, page 169).

A total of 170 aliens landed at the port in 1948. Of these 140 were medically inspected and the remaining 30 were subjected to a detailed examination.

The Airport.

Aircraft from "foreign" arrived from time to time during the year, 23 having been boarded and cleared by medical officers of the port department. None of the 152 passengers and crew was detained under the regulations. Aircrew surveillance, however, is continued where indicated, in respect of aircraft from infected airports which proceed to Bristol for the purpose of maintenance or repair.

Appendix V

THE REPORT OF THE PUBLIC ANALYST, OFFICIAL AGRICULTURAL ANALYST AND GAS EXAMINER.

By E. G. WHITTLE, B.Sc. (Lond.), F.R.I.C.

STAFF FOR THE YEAR 1948.

<i>Public Analyst</i> ...	...	E. G. Whittle, B.Sc. (Lond.), F.R.I.C.
<i>Deputy Public Analyst</i> ...	...	Ivor Dembrey, B.Sc. (Bristol), F.R.I.C.
<i>First Assistant</i> ...	...	Geoffrey G. Fisher, B.Sc. (Birm.), A.R.I.C.
<i>Second Assistant</i> ...	...	A. B. Naish, A.R.I.C.
<i>Third Assistant</i> ...	...	John Smyth, B.Sc. (Bristol).
<i>Chlorination Officer</i> ...	...	Ralph C. M. Putnam.
<i>Laboratory Assistants</i> ...	...	Charles R. Turner. Dennis M. Robbins. John L. Martin. David J. Fisher. Miss Yvonne P. May. Miss Roma M. Smith.
<i>Clerical Staff</i> ...	...	Miss Joan Tyack.

In March the laboratory was brought to full strength with the appointment of Mr. Naish as second assistant. This was the first time in two years that the staff posts were fully occupied. One change took place at the end of the year when Miss Y. P. May left to take up an appointment at the Long Ashton Research station. Miss May had worked in the laboratory for just four years and we were very sorry to lose her services but wish her every good wish for her future career. We were fortunate in filling her post and successfully maintained continuity and a full staff.

The total number of samples examined showed a remarkable increase. 4,436 samples were dealt with as compared with 3,400 in the year 1947, representing an increase of 30 per cent. over that year. This fine achievement was due to the enthusiasm and willing co-operation of the staff. It is always invidious to single out staff for particular mention but I must pay tribute to the excellent and loyal service of Mr. Dembrey, my deputy, and the remarkable way in which the two new members of the staff, Mr. Fisher and Mr. Naish have settled in their appointments. Mr. Turner who has now been associated with the laboratory for 32 years continues to give excellent service in his capacity as a Gas Examiner. My thanks are also due to my typist, Miss Tyack, who has coped so well with the increasing number of reports.

Finally, my best thanks are due to Mr. H. M. Gould, Chief Inspector of the Food and Drugs section, together with his Inspectors, who have co-operated so well with the Laboratory in all matters.

The report is divided into nine main sections as under:—

- Part I Food and Drugs Act.
- Part II Pharmacy and Poisons.
- Part III Fertilisers and Feeding Stuffs.
- Part IV Waters, Swimming bath samples, Effluents and Sewage Chlorination.
- Part V Rag Flock Act.
- Part VI Miscellaneous Analyses.
- Part VII Gas Regulation Act.
- Part VIII Atmospheric Pollution.
- Part IX Metals in Foods.

The main increase of work over 1947 was under Parts I, VI and VIII of this report. Thus, under Part I, Food and Drugs Act, the increase was just over 350 milks and 100 samples of other foods. In Part VI the miscellaneous analyses were practically doubled whilst in Part VIII, Atmospheric Pollution, the increased work was due to the establishment of new sites at Portishead and Avonmouth, together with 178 days' observations of smoke and sulphur dioxide pollution at Canynge Hall.

These three parts of the report require special mention. Of the 2,527 samples examined under the Food and Drugs Act, 1,673 were milks. Milk must continue to receive the closest attention particularly with the instance of one case of nearly 50 per cent. of added water in which a retailer suffered the loss of his registration for the sale of milk. The overall picture of milk adulteration remains fairly steady and since 1943 has ranged from 3—6 per cent. of adulteration of all samples. The presumptive standards for milk remain at not less than 3 per cent. milk fat and 8.5 per cent. solids not fat and a strong case can be made for legislation to prescribe an absolute standard of quality for milk.

The samples submitted under the miscellaneous section showed the wide range of specimens which the analyst is called upon to examine. The report for 1947 subdivided these specimens into five main groups whereas for the year under review, 12 quite distinct sub-groups are possible and include the Ministry of Food and its Infestation Branch, the Ministry of Fuel and Power, the contracts department together with other departments of the City, the Port Health and special examinations undertaken to supplement information required by the laboratory on particular topics.

Interest in atmospheric pollution has been fully maintained and has involved a greatly increased amount of work. A survey of the Portishead area was initiated on January 1st, 1948, and a report was submitted to the Health Committee after a year of operation with respect to the sulphur dioxide pollution at six sites, and of four months with respect to deposit gauges at two sites.

A survey at Avonmouth was continued throughout the year, having been started in 1947 when a scheme for a meat precinct was under consideration. This survey was again mainly confined to sulphur dioxide estimations, although in September sufficient apparatus became available to establish deposit gauges at Avonmouth Docks and T farm. These gauges were not examined in the usual fashion but were considered primarily for pollution by zinc and fluorine. A special report was issued upon this survey.

During the year a limited amount of new apparatus required under the Labelling of Food Order has been received. The alterations to rooms to accommodate the apparatus have not yet been started owing to difficulties over timber permits. It is hoped that materials will soon be made available and that assembly of the equipment and engagement of the additional staff can be undertaken.

I am, my Lord Mayor, Ladies and Gentlemen,

Your obedient servant,

E. G. WHITTLE, *Public Analyst.*

SUMMARY OF SAMPLES.

Table 1

Food and Drugs Act	2,527
Waters, Swimming Baths and Effluents ...	356
Fertilisers and Feeding Stuffs	12
Rag Flock	7
Gas Undertakings	624
Atmospheric Pollution	408
Miscellaneous	483
Health Department (C.S.I.)	17
Pharmacy and Poisons Act	2
	<hr/>
	4,436

Part I.

FOOD AND DRUGS ACT.

During the year 2,527 samples were submitted for analysis under the Food and Drugs Act, 1938.

Table 2 shows the nature and number of samples submitted with the number reported genuine and the number adulterated.

Table 2

Nature of sample	Number examined	Number genuine	Number adulterated
Milk	1,673	1,605	68
Ice Cream	76	76	0
Ice Lolli	1	1	0
Butter	111	111	0
Margarine	104	104	0
Cooking Fat	103	103	0
Dripping	2	1	1
Cheese	10	10	0
Tea	13	13	0
Cocoa	12	8	4
Coffee and Coffee and Chicory and Coffee and Chicory Essence ...	12	11	1
Dried Egg	1	1	0
Gelatine Powder	8	8	0
Ground Ginger	4	4	0
Almond Paste and Almond Paste Substitute	5	5	0
Rose Hip Syrup	1	1	0
Orange Juice (Concentrated)	1	1	0
Soup and Soup Powder	5	5	0
Golden Raising Powder	4	4	0
Salad Cream	3	3	0
Baking Powder	8	8	0
Synthetic Cream	1	1	0
Flavourings	2	2	0
Dried Fruit	1	1	0
Sausages and Sausage Meat	22	20	2
Pickles and Sauce	26	26	0
Vinegar	20	19	1
Curry Powder	17	16	1
Pepper	10	10	0
Mustard and Mustard Compound	10	10	0
Mineral Water	24	24	0
Concentrated Barley Water	1	1	0
Mixed Herbs	7	7	0
Meat and Fish Paste	9	9	0
Meat and Yeast Extract	4	4	0
Gravy Browning and Powder	8	8	0
Beer	16	16	0
Cider	12	11	1
(1) Sugars	23	23	0
(2) Starchy Foods	55	52	3
(3) Spirits	29	25	4
(4) Drugs	73	69	4
Total ...	2,527	2,437	90

Adulteration rate of all samples, 3.56%

Number of samples examined	...	2,527
„ „ „ adulterated	...	90
„ „ „ genuine	...	2,437

Of the 2,527 samples examined 473 were sealed (having been divided in accordance with the provisions of section seventy of the Food and Drugs Act, 1938) and 2,054 were unsealed or informal samples.

Comparative figures for adulteration in Bristol for the last five years are given in Table 3.

Table 3

	1944	1945	1946	1947	1948
Total number of samples ...	1,996	2,353	2,272	2,068	2,527
Milk, per cent. adulterated ...	2.78	5.54	5.82	4.92	4.06
Foods (other than milk) per cent. adulterated	5.84	4.33	2.56	1.61	2.58
Drugs, per cent. adulterated ...	0	5.26	2.84	3.22	1.31
Total per cent. adulterated ...	3.46	5.18	4.84	3.72	3.56

Milk.

Of the 68 samples condemned, 35 were deficient in fat, and 33 gave evidence of added water.

Table 4 gives the figures for samples containing added water.

Table 4

No.	Analytical Data			Result
	Fat	Non-fatty solids	Freezing point depression °C	
V. 5	3.20	6.90	.419	18.8% Added Water
V. 6	2.80	7.30	.462	14.1% " "
V. 7	3.30	7.90	.506	7.1% " "
V. 10	3.45	8.35	.529	1.8% " "
V. 11	3.55	7.75	.487	8.8% " "
V. 41	3.15	6.97	.410	18.2% " "
V. 42	3.10	6.80	.418	20 % " "
V. 43	2.85	7.60	.464	10.6% " "
V. 44	2.80	7.45	.450	12.4% " "
V. 60	2.75	7.00	.439	17.7% " "
V. 61	2.70	7.80	.493	8.2% " "
V. 62	2.90	7.45	.445	12.4% " "
V. 63	3.00	6.80	.403	20 % " "
V. 76	2.15	5.40	.329	36.5% " "
V. 329	3.90	7.85	.500	7.7% " "
V. 369	3.20	7.70	.482	9.4% " "
V. 376	3.35	7.75	.469	8.8% " "
V. 378	3.95	8.25	.506	2.9% " "
V. 379	3.25	8.20	.509	3.5% " "
V. 380	3.80	8.10	.524	4.7% " "
V. 570	1.95	4.55	.266	46.5% " "
V. 619	4.25	8.20	.479	3.5% " "
V. 634	3.85	7.85	.483	7.6% " "
V. 635	3.30	8.20	.497	3.5% " "
W. 22	3.40	7.90	.491	7.6% " "
Y. 1	3.95	8.10	.449	4.7% " "
Y. 17	3.55	7.35	.450	13.5% " "
Y. 60	2.50	6.20	.376	27 % " "
Y. 173	7.70	7.70	.453	9.4% " "
Y. 175	2.70	7.85	.476	7.6% " "
Y. 188	3.80	8.20	.514	3.5% " "
Z. 132	3.25	8.25	.519	2.9% " "
Z. 133	3.25	8.25	.518	2.9% " "

Table 5

				Samples of milk condemned for	
				deficiency in fat	added water
1st Quarter	...	...		6	18
2nd "	...	...		25	3
3rd "	...	...		2	5
4th "	...	...		2	7
				—	—
				35	33
				—	—

Thirty-nine samples were reported as abnormal, being low in non-fatty solids, and fourteen as suspicious, due to slight deficiencies of fat or very small amounts of added water.

The following are the figures for the suspicious samples.

Table 6

No.	Fat %	Non-fatty solids %	Total solids %	Freezing point depression °C.
V. 39	3.50	8.40	11.90	.528
V. 113	3.05	8.20	11.25	.504
V. 154	3.50	8.40	11.90	.526
V. 235	3.41	8.40	11.81	.518
V. 361	3.10	8.25	11.35	.525
V. 362	3.30	8.35	11.65	.512
V. 381	3.60	8.30	11.90	.528
V. 641	3.50	8.45	11.95	—
V. 642	4.10	8.30	12.40	—
W. 216	2.90	8.80	11.65	—
Z. 30	3.50	8.40	11.90	.525
Z. 32	3.30	8.45	11.75	.525
Z. 79	3.00	8.30	11.30	.525
Z. 416	2.90	8.55	11.45	—

Average composition of genuine milks for 1948.

Table 7

Month	Number for each month	Specific gravity	Fat %	Non-fatty solids %
January ...	177	1,031.6	3.78	8.80
February ...	140	1,031.4	3.73	8.75
March ...	117	1,031.2	3.63	8.69
April ...	141	1,031.5	3.51	8.72
May ...	107	1,032.2	3.52	8.89
June ...	146	1,031.9	3.69	8.87
July ...	72	1,031.3	3.58	8.69
August ...	86	1,031.3	3.71	8.72
September ...	178	1,031.8	3.65	8.85
October ...	122	1,031.9	3.86	8.91
November ...	129	1,031.6	3.90	8.84
December ...	137	1,031.5	3.85	8.80
Average for year ...	1,552	1,031.6	3.71	8.80
	(total)			

The above table does not include milk samples reported as suspicious and abnormal.

The average figures for all samples of milk examined during the year were as follows:—

Specific gravity	1,031.5
Fat	3.67%
Non-fatty solids	8.76%

Adulterated samples other than Milk.**Table 8**

Number of sample	Nature of sample	Result of analysis
V.D. 56	Vinegar	Contained 35 nematode worms per millilitre.
V.D. 61	Beef Sausages	Deficient in meat to the extent of 50%.
V.D. 78	Beef Sausages	Deficient in meat to the extent of 38.4%.
V.D. 144	Whisky	6.9% Added Water.
W.D. 64	Cider	Contained an excess of Copper to the extent of 4 parts per million.
W.D. 159	Whisky	3.8% Added Water.
W.D. 200	Whisky	10% Added Water.
X.D. 10	Sulphur Ointment	Deficient in Sulphur to the extent of 10%.
X.D. 26	Cocoa	Unsatisfactory on account of evidence of mould growth.
X.D. 103	Tincture of Iodine	12.2% Deficient in Iodine.
X.D. 104	Tincture of Iodine	6.1% Deficient in Iodine.
Y.D. 57	Cocoa	Unsatisfactory on account of evidence of infestation.
Y.D. 59	Cocoa	Unsatisfactory on account of evidence of infestation.
Y.D. 60	Cocoa	Unsatisfactory on account of evidence of infestation.
Y.D. 67	Cake Mixture	Unsatisfactory on account of evidence of infestation.
Y.D. 131	Tincture of Iodine	12.2% Deficient in Iodine.
Y.D. 145	Dripping	Unsatisfactory due to rancidity.
Y.D. 155	Whisky	5.4% Added Water.
Z.D. 94	Curry Powder	Contains 32 parts per million of Lead.
Z.D. 143	Coffee and Chicory Essence	28% Deficient in Caffeine.
Z.D. 201	Pearl Barley	Unsatisfactory on account of evidence of mite infestation.
Z.D. 202	Pearl Barley	Unsatisfactory on account of evidence of mite infestation.

Ice Cream

Seventy-six samples were submitted under this heading and all were returned as genuine. 24 samples contained 8% or more of fat, the remainder containing a mean percentage of 4.06% of fat. Metals and preservatives were not detected.

The position with respect to the fat content of ice cream shows a decided improvement over that existing a year ago, when only 2 samples of 63 examined contained over 8 per cent. of fat with 61 averaging only 2.5 per cent. fat.

Reputable manufacturers have endeavoured to maintain a fat content of not less than 8 per cent. of milk fat as suggested several years ago by the Ice Cream Manufacturers' Association. Thus it would appear that example has been set and the public may expect an improvement in the quality of a commodity which has now become an all the year round article of diet.

One sample of Ice Lolli was examined and found to be genuine.

Fatty Substances

The following samples were examined and all found to be genuine, with the exception of one sample of dripping which was rancid.

111	samples of butter
104	„ „ margarine
10	„ „ cheese
103	„ „ cooking fat
2	„ „ dripping

The Reichert figure on the samples of butter varied between 24.3 and 35.5 giving a mean of 29.3. The mean moisture figure was 14.3%. The maximum permitted moisture figure of butter and margarine is 16.0%, Food and Drugs Act, 1938, sec. 32.

The butter fat content of margarine was well below 10% in all cases. The following are the mean analytical figures.

Moisture	14.1%
Reichert	4.7

Although boric acid preservative did not exceed 0.25%, which is the amount permitted, several samples in the last quarter reached this maximum.

The fat content of the samples of cheese varied between 28.1% and 45.8% giving a mean figure of 36.9%. The average amount of moisture was 31.04 and the mean Reichert figure was 29.4.

All of the samples of cooking fat consisted of 100% fat. Since cooking fats are generally used as a substitute for lard, one would expect them to contain no moisture and this was found to be the case in all samples. The mean Iodine Value of these samples was 57.8

Two samples of dripping derived from tripe were examined for rancidity. One sample was returned as genuine and the other was very rancid. It is considered that fats derived from such sources are likely to develop rancidity and unpleasant tastes.

Tea

Thirteen samples were examined. They all gave typical microscopical appearances and were genuine. The mean analytical figures are as follows:—

				%
Moisture	...	...	...	6.47
Total ash	...	...	...	5.56
Soluble ash	...	...	...	3.41
Alkalinity of soluble ash (K ₂ O)				1.62

Coffee

Five samples of Coffee and one of Coffee and Chicory were examined. The average specific gravity of a 10% decoction of the samples of coffee was 1,010.0.

The sample of Coffee and Chicory gave a specific gravity figure of 1,019.6 for a 10% decoction.

Microscopical examination revealed typical structures in each case.

Coffee and Chicory Essence

Six samples were examined, one being condemned for a deficiency in Caffeine to the extent of 28%. The average figure for Caffeine in the remaining 5 samples was 0.5%. The minimum requirement for coffee and chicory essence is 0.25% caffeine.

Benzoic acid preservative permitted up to a maximum of 450 parts per million was not detected in any of the samples examined.

Cocoa

12 samples of cocoa were submitted, four being condemned due to evidence of infestation. The mean analytical figures for the other 8 samples are as follows:—

				%
Moisture	...	...	...	5.50
Ash	...	...	...	6.78
Insoluble Ash	...	...	...	1.87
Alkalinity as K ₂ O	...	...	...	1.87

The infestation was mainly due to *Ephestia* or cocoa moth. Webbing was particularly in evidence. One of the four samples condemned was heavily contaminated with mould.

Baking Powder

Four samples of Baking Powder were examined for carbon dioxide and gave the following results:—

Table 9

Number of sample	Total CO ₂	Available CO ₂	Residual CO ₂
V.D.5	14.83	14.74	0.09
V.D.6	12.78	12.72	0.06
V.D.7	11.63	11.40	0.23
V.D.8	15.29	15.00	0.29

The minimum requirement for available carbon dioxide is 8 per cent.

The amounts of fluorine found in the four additional samples were within the limits laid down in the Fluorine in Food Order 1947.

Golden Raising Powder

Four samples of Golden Raising Powder were examined, all of which were genuine.

The mean figures of analysis are appended.

Available CO ₂	...	...	11.58
Residual CO ₂	...	...	0.39
Ash ...	...	...	39.24

The minimum requirement for available carbon dioxide is 6 per cent.

Gelatine Powder.

Eight samples were examined and in all these samples ash, zinc, arsenic, lead and copper were within the limits laid down in the Edible Gelatine Order, 1948.

Dried Egg.

One sample was examined and gave no evidence of infestation. Upon reconstitution it was of satisfactory flavour score. The refractive index of the powder in 5 per cent. solution was within the accepted range.

Ground Ginger.

Four samples were examined and all complied with the British Pharmacopœia limits for ash, water soluble ash, water soluble extractive and alcohol soluble extractive.

Almond Paste and Almond Paste Substitute.

One sample of Almond Paste was examined the figures of analysis being, Fat 12.63%, Moisture 14.52%, Protein 9.04% and Ash 1.28%.

Four samples of Almond Paste Substitute gave the following mean analytical figures:—

Sucrose %	...	...	...	49.7
Moisture %	...	...	...	13.5
Fat %	...	...	...	9.2
Protein %	...	...	...	8.9
Ash %	...	...	...	1.3

These pastes were all of satisfactory keeping quality.

Rose Hip Syrup.

One sample was found to comply with the stated quantity of ascorbic acid, vitamin C.

Concentrated Orange Juice.

One sample was found to comply with the stated quantity of ascorbic acid, vitamin C.

Synthetic Cream

One sample was examined and returned as genuine. The sample was found to consist of approximately 2 parts of water to 1 part of a fat, emulsified by an agent of the type of glyceryl monostearate. The product was stated to be used in bakery practice.

Flavourings

One sample Vanilla Flavouring was examined and found to be genuine.

One sample of Peppermint Essence was found to possess the characters of a genuine essence.

Concentrated Barley Water

This sample was of good quality and complied with the current Soft Drinks Order.

Salad Cream.

Two samples of Salad Cream were examined and one of Salad Dressing, all three samples being genuine.

The mean analytical figures for the two samples of Salad Cream are as follows:—

Total solids %	...	...	44.4
Edible Oil %	...	...	31.2
Dry egg yolk solids %	...	...	1.6

The 1945 Order prescribes not less than 25 per cent. by weight of edible oil and not less than 1.35 per cent. by weight of egg yolk solids.

Sausages and Sausage Meat.

Twenty samples of sausages and two of sausage meat were examined. Two samples of sausages were condemned for deficiency in meat.

The mean analytical figures for the 20 genuine samples are as follows:—

				%
Moisture	...	...	...	58.0
Ash	...	...	...	15.3
Protein	...	...	...	10.6
Fat	...	...	...	15.4

The total meat content ranged from 49.0 to 55.0%

Pickles and Sauce.

Twenty-six samples were examined under this heading and included Chutney, Pickles, Sauce and Ketchup. All these samples were genuine.

A measure of control is exercised in the Pickles and Sauces Order, 1947, but proposals are under consideration to include a minimum percentage of tomato solids in ketchup, etc., together with a maximum for copper content. 5 samples of tomato sauce and ketchup complied with the suggested standards.

Vinegar.

One of the 20 samples of vinegar submitted was condemned on account of the presence of minute worms. The mean figures for the genuine samples are as follows:—

			Malt	Artificial
Specific Gravity	...	...	1,011.8	1,007.6
Total Solids %	...	...	1.40	0.32
Ash %	...	...	0.24	0.06
Acetic Acid %	...	...	4.61	4.26

Arsenic was well below the limit in all cases.

The presence of nematode worms, vinegar eels, renders the vinegar unsightly and indicates unsatisfactory storage conditions. Such trouble is likely to arise in the summer months. The eels are non-pathogenic to man and cause no other harm as far as is known.

Curry Powder.

Seventeen samples of Curry Powder were examined. One sample was condemned for containing 32 parts per million of lead. The average figures for the other 16 samples are as follows:—

				%
Moisture	...	...	...	10.9
Ash	...	...	...	7.7
Salt (NaCl)	...	...	...	4.71

Arsenic was detected in only a few samples in small traces, and the amounts of lead found were also within the suggested limit of 10 parts per million. This limit is subject to review with the object of lowering it when possible to 5 parts per million.

Pepper.

Ten samples were examined, the average figures of analysis were as follows:—

				%
Moisture	...	...	...	10.8
Ash	...	...	...	2.5
Silica	...	...	...	0.15

The highest amount of silica found was 0.19%. All the samples showed the usual microscopical appearances and were genuine.

Mustard and Mustard Compound.

Of the 10 samples examined, 2 were samples of liquid Mustard, 6 were samples of Mustard Compound, and 2 samples of Mustard.

The figures of analysis for the liquid mustard were:—

				%	%
Moisture	...	...	...	63.01	60.49
Ash	...	...	...	5.52	5.53
Allyl isothiocyanate	...	...	...	0.20	0.08

The figures of analysis for the two samples of mustard were:—

				%	%
Moisture	...	...	...	7.40	5.23
Ash	...	...	...	3.70	3.60
Allyl isothiocyanate	...	...	...	0.45	0.43

The allyl isothiocyanate content was restored to not less than 0.35 per cent. by an amendment order after a temporary reduction to 0.28 per cent. owing to supply difficulties.

Non-alcoholic drinks.

Twenty-four samples of mineral water were submitted. All were genuine and satisfied the requirements of the Preservative Regulations in regard to sulphur dioxide and benzoic acid.

Mixed Herbs.

Seven samples were analysed and all were found to be genuine. No undue mineral matter was detected.

Meat and Fish Paste.

Nine samples were examined and 8 were reported as genuine, 5 samples were of Meat Paste and 3 were of Fish Paste. The average figures of analysis were as follows:—

				%
Moisture	...	...	...	66.8
Fat	...	...	...	8.4
Protein and Ash	...	...	...	15.7

The meat content ranged from 50—58 per cent. with a prescribed minimum of 50 per cent. Fish pastes should contain at least 70 per cent. of fish. One sample of fish paste was condemned as unfit for consumption by virtue of decomposition.

Meat and Yeast Extract.

Four samples were examined and found to be genuine.

Gravy Browning.

Eight samples were examined the mean analytical figures being, Moisture 10.3%, Protein 11.8%, and Ash 17.0%.

Beer.

Sixteen samples of beer were examined and all were genuine. The amounts of Sulphur Dioxide found were within the limit of 70 parts per million and only very small traces of arsenic were detected.

Cider.

Twelve samples were examined, one of which was found to be adulterated due to an excess of Copper. In the other 11 samples the amounts of Sulphur Dioxide, Lead, Copper and Arsenic found being within the prescribed or accepted limits.

Sugars.

Twenty-three samples of sugar products were examined, consisting of the following varieties.

Description	No. of samples
Sugar	14
Jam	8
Honey	1

The fourteen samples of sugar contained between 99 and 100 per cent. sucrose with very little ash and moisture.

The samples of jam satisfied the preservative regulations. The soluble solids ranged from 68.00 to 81.58 per cent. as obtained from the immersion refractometer, giving an average figure of 73.7 per cent., which is well above the standard of the Food Manufacturers' Federation, *i.e.*, 68.5 per cent.

The sample of honey gave the following figures:—

				%
Moisture	...	...	...	16.5
Sucrose	...	...	...	2.8
Ash	...	...	...	0.23

The test for added commercial invert sugar gave a positive result.

Starchy Foods.

Fifty-five samples were examined, three being condemned due to infestation. More than half the samples were primarily examined for infestation; the average figures of analysis for the other samples are as follows:—

			No. of samples	Moisture %	Ash %	Nitrogen %	Available CO ₂
Pudding Mixture	...	...	1	—	—	—	2.01
Bun Flour	...	...	1	—	—	—	3.52
Cake Mixture	...	...	2	—	—	—	0.93
Self-raising Flour	...	...	9	—	—	—	0.59
Plain Flour	...	...	4	12.40	1.40	13.50	—
Custard Powder	...	...	3	13.10	0.19	0.72	—

Three samples of macaroni were examined for acidity. The range was found to be 0.08 to 0.18 per cent. calculated as KH_2PO_4 . A sample submitted under the miscellaneous section of this report gave 0.44 per cent. and the abnormality of the sample was considered to be due to this high acidity.

Spirits.

Twenty-nine samples of spirits were examined, consisting of the following:—

Whisky	...	...	...	19
Rum	...	...	...	6
Gin	...	...	...	4

It is significant that whisky, the least easily obtained commodity, was found adulterated in four cases by the addition of water.

Drugs.

The 73 samples of drugs consisted of the following:—

Boracic Ointment	...	...	12	Zinc Ointment	...	...	8
Sulphur Ointment	...	...	9	Aspirin Tablets	...	...	4
Sulphur Tablets	...	...	4	Citric Acid	...	...	4
Fynnon Salts	...	...	1	Glauber Salt	...	...	4
Bicarbonate of Soda	...	...	5	Tartaric Acid	...	...	4
Tincture of Iodine	...	...	7	Borax Crystals	...	...	1
Cream of Tartar	...	...	1	Borax Powder	...	...	4
Epsom Salt	...	...	5				

All drugs submitted as preparations conforming to the British Pharmacopœia 1932 were, with three exceptions, found to comply with the standards laid down.

The sample of Cream of Tartar taken from an Institution was found to contain 30 per cent. of extraneous starch.

On 1st September, 1948, a new edition of the British Pharmacopœia was published. This Pharmacopœia, the seventh to be issued, is a highly technical volume of over 900 pages and is of great importance to all engaged in the control and study of drugs. Some 155 articles and preparations are included in the B.P. 1948 which were not in the 1932 edition. Monographs covering antimalarials, sulphonamides and some of the more widely used and new anaesthetics, analgesics and bactericides are given.

There are 34 monographs dealing with compressed tablets and the hormone group is extended to include the class of sex hormones.

The vitamin group includes monographs on vitamins A, C, D, and four members of the B group, aneurine hydrochloride, riboflavine, nicotinic acid and nicotinamide.

A number of war-time substitutes or alternatives have been deleted.

The overall effect of the new B.P. will be increased control work and in the vitamin field the newly acquired apparatus, when installed and fully operative, should prove invaluable.

Preservatives and Colour Matter.

No evidence of preservative was found in milk or butter during the year. Considering that more than sixteen hundred samples of milk were examined, it is very satisfactory to be able to report that not one sample contained formaldehyde, boric acid or artificial colouring matter.

All samples examined for sulphur dioxide preservative were found to comply with the regulations as shown in the table.

Table 10

Nature of sample				Number of samples	Highest estimation parts per million	Limit allowed
Beer	...	...	...	3	19	70
Cider	...	...	...	4	55	200
Jam	...	...	...	8	10	100
Mineral Water	...	...	...	5	22	70

Benzoic acid was also detected in four samples of Mineral water the amounts found being within the limit.

PART II.

Pharmacy and Poisons Act, 1933.

Two samples were examined under this Act, one being a sample of bleach cleaner and disinfectant submitted in a soft drinks bottle. The liquid was shown to be a solution of sodium hypochlorite with 6.5 per cent. available chlorine and would have proved harmful if taken internally.

The other a sample of disinfectant fluid which contained 5.5 parts by weight of phenols and cresols in 100 parts by weight of the fluid. This sample was a Part II poison as defined by the Pharmacy and Poisons Act, 1933.

PART III.

Fertilisers and Feeding Stuffs Act.

Table 11—Fertilisers

No. F. & F.	Nature of Sample	% Phosphoric Acid (P_2O_5)						% (N)		Fineness		Free Acid as H_2SO_4		Potash K $2O$	
		Soluble		Insoluble		Total		Nitrogen		F		G		G	
		G	F	G	F	G	F	G	F	G	F	G	F	G	F
1	Bonemeal					29.75	29.10	0.65	1.05						
2	"					29.00	28.20	0.90	1.20						
3	Sulphate of Ammonia							21.00	20.80			0.025	0.025		
4	"							20.50	20.70			—	0.032		
5	Seamus Seaweed Humus					3.00	3.80	3.00	3.10					2.00	0.80
7	"					3.00	4.90	3.00	4.80					2.00	1.10
9	" Basic Slag					14.00	15.00			80	85				
10	"					14.00	15.70			80	85				
11	Sulphate of Ammonia							20.00	20.50			—	0.018		
12	"							20.60	20.40			—	0.015		

G = Guaranteed.

F = Found.

Table 12—Feeding Stuffs.

No. F. & F.	Nature of sample	Oil %		Albuminoids %		Fibre %	
		G	F.	G	F.	G	F.
6	No. 1 National Poultry Food Balancer Meal	4.00	4.10	20.0	19.2	9.0	9.2

Samples No. 1, 2, 3, 6, 9, 11 and 12 were satisfactory and require no further comment.

Sample No. 4 was satisfactory apart from a technical failure to include a declaration of free acidity in the statutory statement.

Samples 5 and 7 Seaweed Humus both bore confusing statements regarding P₂O₅ and K₂O figures. In both cases phosphoric acid was declared in terms of phosphorus (P) instead of as P₂O₅ and potash as K instead of K₂O. With these interpretations the samples were found satisfactory in respect of Nitrogen (N) and phosphoric acid (P₂O₅) but deficient in K₂O.

Sample No. 8, not included in the table, a third sample of Seaweed Humus was found to contain 0.05 per cent. free alkalinity expressed as NH₃ and was not considered likely to cause serious scorching except to delicate or susceptible plants.

Sample No. 10 contained P₂O₅ in excess of the declared amount but this was not to the prejudice of the purchaser. The degree of fineness was satisfactory.

PART IV.

Water and Sewage Chlorination.

Three hundred and fifty-six samples were examined, the various sources of supply being as follows:—

Table 13.

City Water supplied from tap at Canynge Hall ...	...	...	...	11
City water supplied from Pumping Station, Knowle Corporation Institutions ...	...	...	...	50
West Gloucester supply at Downend and Frenchay	...	...	...	7
Portishead supply at Ham Green Hospital	...	...	...	45
Private Houses ...	...	...	...	23
Wells, pumps and lakes	...	...	...	11
Swimming Bath Waters	...	...	...	35
Subsoil Percolation water	...	...	...	118
Sewage and Trade Effluent	...	...	...	5
Avonmouth Docks ...	...	...	...	24
Ships in Port	...	...	...	11
Miscellaneous	...	...	...	4
				12
				356

The City water as supplied by the Barrow Reservoir is sampled in the laboratory and the Sherbourne spring water supplying a portion of the southern part of the city is taken regularly at Knowle.

The mean figures of analysis are appended, together with those of the West Gloucester and Portishead supplies.

Table 14.

Source	Bristol Supply		Taps at Downend & Frenchay	Tap at Ham Green
	Tap at Canyng Hall	Tap at Jubilee Rd., Knowle		
Number of samples ...	11	50	45	23
Total solids	30.1	34.3	36.1	56.0
Mineral matter	28.1	31.8	34.0	51.4
Loss on ignition	2.0	2.5	2.1	4.6
Chlorine as Chlorides ...	1.3	1.04	3.2	3.3
Total Oxidised Nitrogen	0.12	0.13	0.08	0.07
Free Ammonia	0.0024	0.0042	0.0020	0.0090
Albuminoid Ammonia ...	0.0017	0.0021	0.0027	0.0036
Total Hardness (Clark's Scale)	19.5	22.6	19.0	28.0
Permanent Hardness (Clark's Scale)	6.9	6.1	5.0	10.0
pH	7.5	7.4	7.5	7.5

Waters.

The above figures show that these public supplies possess great organic purity and only on a few occasions were the bacteriological counts rather higher than desirable.

Occasionally samples collected at Canyng Hall have given a very faint reaction for nitrite and only on a few occasions was any residual chlorine detected. This is probably due to distance from the reservoir, and other factors such as age of mains and dead ends are likely to have some influence on these findings.

Water from the Sherbourne collected at Knowle gave well marked evidence of chloramine treatment showing only slight traces of nitrites. Free residual chlorine was not detected in the West Gloucester and Portishead supplies.

For the convenience of shipping at the docks more adequate control was maintained both on supplies to ships and for water in the dock area. Throughout the year samples were examined from various points in the area and all proved to be satisfactory.

Attention to swimming baths was fully maintained throughout the year. The Ministry of Health have recommended a minimum of 0.2 parts per million for the free chlorine and on a few occasions only did samples fall below this figure.

At the present time insufficient is known regarding the culpability of swimming baths in spreading water borne diseases and indeed in some quarters it is doubted whether the virus of the infantile paralysis disease is in fact water borne. On the other hand some authorities have little doubt of the dangers of its conveyance and chlorination still appears the best safeguard until more is known of the virus.

Sewage Chlorination.

General.

Sewage Chlorination plant was in operation as necessary from end of May until end of September, approximately 19 weeks, during which time 75 drums (about 61 tons) of liquid chlorine were consumed.

During the hot spell at the end of July, when tidal conditions were at their worst, the condition of the river Avon deteriorated in 2 or 3 days in spite of the fullest possible treatment. Had the plant been available, emergency treatment of the river could then have been tried with some prospect of positive results.

Except for trial runs, owing to the inclement weather, very little work has been done with bleach liquor.

Experimental River Treatment.

The Port of Bristol Authority were approached for permission to use the entrance lock at Bathurst Basin. Their consent was readily given and the staff were most helpful and co-operative.

Three chlorinators were installed, under a tarpaulin shelter to feed chlorine solution into the lock 24 hours a day. In this way, it was hoped to build up a reserve of about half a million gallons of solution ready to release on the flood tide, checking by means of samples and tests to find the optimum times and amounts.

Owing to the already good condition of the river, no conclusive evidence was obtained at the time of the experiment (29th June—2nd July).

Unfortunately, during the one hot week, all available plant was fully occupied and no experimental work could be done at that time.

However, sufficient information has been obtained to show that the river can be treated by this means with some possibility of success.

Liquid Chlorine.

The supply position has been greatly improved by using direct road haulage. This has reduced delays and enabled smaller reserve stocks to be held. By taking advantage of the weather and exercising rigid economy, the total consumption of chlorine this season has been the lowest of any since the war.

Maintenance and Renewal of Plant.

Most of the chlorinators are of obsolete design, having been purchased about 1935/6 and are in need of replacement.

All plant is being overhauled during the winter months, spares being taken from the most dilapidated machine to avoid the cost of specially made parts. One new replacement chlorinator has been purchased.

The remains of the old machine, with others as available will be adapted for service as a high capacity portable chlorinator for the river work outlined above.

Proposed activities for 1949 season.

It is recommended that the experimental river treatment be continued and that flexibility of both plant and organisation be improved where possible in order to obtain and keep control of the situation under the worst conditions.

A new site has been found for the existing Broadmead plant, and it is hoped to proceed with the construction of a modern station installing two high capacity chlorinators, with improved arrangements for warming the chlorine drums to prevent refrigeration.

Subsidiary Activities.

As required, investigations have been made into the discharge of chemical wastes from various industrial concerns. This has involved the making of several hundred tests on site, and the bringing of many samples into the laboratory for chemical analysis. A personal contact has been established with many concerns which has proved most helpful in reaching solutions to many of the problems connected with sewer disintegration and trade waste disposal.

The children's paddling pool at Blaise Castle has been cleaned and chlorinated under the supervision of the Chlorination Officer, on behalf of the Health Department.

The water supply to Frenchay Park Sanatorium has been chlorinated for some three months owing to suspected pollution. The hypochlorinator used for this purpose was purchased by the Health Department, on the recommendation of the Chlorination Officer, and is kept always available for any emergency sterilisation work.

PART V.**Rag Flock Act.**

Seven samples were examined to see whether they conformed to the standard of cleanliness laid down in the Rag Flock Acts 1911 and 1928, and the Rag Flock Regulations 1912. All the samples complied with the requisite standard of a maximum of 30 parts of chlorine per 100,000.

As stated in the 1947 Report a new approach is made in The British Standards Institution B.S. 1425 to the problem of cleanliness of Fillings and Stuffings for bedding, upholstery, stuffed toys and the like.

A washing test is proposed using a detergent solution of ammonia, methyl alcohol, acetone and water which is capable of giving concordant and reproducible figures as a measure of dirt extract.

The work is not yet incorporated in new legislation and therefore the chlorine figure remains as the only statutory standard.

PART VI.

Miscellaneous Analyses.

Table 15.

1. Infestation	...	...	...	...	...	...	27
2. General	...	...	...	...	...	...	114
3. Biochemical	...	...	...	...	...	...	31
4. Toxicological	...	...	...	...	...	...	23
5. Health Department (C.S.I., 17; Miscellaneous, 25)	...	...	...	...	...	...	42
6. Ministry of Food	...	...	...	...	...	...	9
7. Ministry of Food (Infestation Branch)	...	...	...	...	...	...	34
8. Ministry of Fuel and Power Motor Spirit (Regulation) Act, 1948	...	...	...	...	...	...	26
9. Contracts Department	...	...	...	...	...	...	13
10. Other Corporation Departments	...	...	...	...	...	...	19
11. Port Health	...	...	...	...	...	...	51
12. Special Examinations—							
(a) Feeding Bottles	...	...	...	...	...	...	12
(b) Milk for fluorine	...	...	...	...	...	...	14
(c) Teeth for lead	...	...	...	...	...	...	77
(d) Atmospheric Pollution	...	...	...	...	...	...	8
							<hr/> 500 <hr/>

(1) *Infestation.*

Twenty-five articles of food and two specimens of insects were examined. One specimen of Beetles found in a house was shown to be *stegobium paniceum*. It was suggested that the source might be some infested foodstuff and subsequently we received a sample of All Bran which was heavily infested with the same insect.

Seventeen of the foodstuffs submitted were found to be infested and included four samples of Prunes infested with *tyroglyphidæ*, Semolina (one sample), Oatmeal (four samples), and Barley Flakes (one sample) also infested with the same mite.

Other types of infestation included *Stegobium paniceum* in Dried Parsley, calandra in Semolina, larvæ of mushroom fly in Mushrooms, lepidoptera in Chillies and ptininidæ in pea soup powder.

(2) *General.*

The 114 samples in this category defy adequate summarising. They included foodstuffs, tin greasing emulsions, waters from the Zoological Garden's sea lions pool, the jaw of an ox, edible colouring and distilled water.

Among the more interesting specimens the following deserve mention to illustrate the diverse nature of the specimens received for examination.

A powder alleged to be a cure for rheumatism was found to consist of 95 per cent. of carbon.

An Ice Cream was found to contain traces of lead derived from the bearing metal of the mixing apparatus.

A slice of tomato was found to have a pronounced taste of iodoform and despite many efforts no satisfactory explanation of its presence was forthcoming.

Several samples of butter were found to be bleached in colour and tallowy to taste. The explanation was found in the fact that the butter had been left uncovered and exposed to sunlight on a restaurant table.

The tin greasing emulsions were of a different character, one containing mineral oil and the other, arachis oil emulsified with an agent of the type of glyceryl stearate. The use of mineral oil in foodstuffs is strongly deprecated by the Ministry of Food.

A very interesting specimen concerned livers cooked in fat. The fat had a pronounced green colour with green spots on the pieces of liver. At first it was thought that the meat had been dyed with one of the green colourings used for condemned meat. It was shown however, that the colour was due to traces of copper. The frying fat contained 16 parts of copper per million, the bullock's liver 112 parts per million and the pig's liver 32 parts per million. It was considered that the copper had combined with the fatty acids although precisely why the copper should be released from the livers is not understood.

The Superintendent of the Zoological Gardens asked for advice in treating the sea lion's pool with copper sulphate, with the object of controlling algal growths in the water, particularly during summer months. A dosage of 0.2 parts per million was suggested but later it was decided to change the pool water at more frequent intervals than heretofore.

A sample of cooked custard was found to contain 2.1 parts per million of copper. The possibility of off flavour, particularly tallow flavours, was suggested. It is known that amounts of copper of the order of 1.5 parts per million can initiate such flavours.

Novocaine crystals and solution were examined for the Eye Hospital and it was suggested that faults had arisen during the sterilisation process. Later the hospital asked for assistance checking the strength of a very dilute solution of potassium permanganate.

A sample of black grape jelly presented an interesting problem. It was submitted with a complaint of the presence of glass fragments. It was shown that the offending particles were in fact cream of tartar or potassium hydrogen tartrate. This compound is naturally present in grapes and had separated in crystalline form upon concentration of the jelly. This is rather akin to the problem of the presence of struvite, magnesium ammonium phosphate, reported in canned salmon some years ago.

A sample of macaroni was found to have an excessive acidity, calculated as potassium hydrogen phosphate, as compared with control samples.

A sample alleged to have been sold as sweets was found to consist of modelling wax. It appeared that children had entered a fancy goods stores asking for "some of that." The wax was not, in fact, sold as sweets, and the vendor had no idea that the children intended to eat the wax. It is doubtful if the youngsters would have consumed much of such an unpalatable product.

Two years ago the analyst reported adversely on a large number of samples of dried milk. Much of this milk had been subjected to prolonged storage and in consequence had become insoluble in varying degrees. In the current year only two samples were examined and both were condemned for a similar reason, insolubility of the powder.

A specimen of marshmallows was found to be satisfactory apart from a slight off flavour in the maize starch used as a dusting powder.

With the approach of the end of the year accent was on the examination of seasonable goods, in particular walnuts. Kiln dried nuts were generally satisfactory, but other types showed heavy mould growth and excessive moisture. Of 12 samples examined six were found to be unfit for human consumption. The percentage of nuts condemned in the individual samples varied from 44 to 100%. It was thought that 40% nuts unsatisfactory was a reasonable maximum.

Finally in this subsection a sample of *Aqua Destillata* submitted by a hospital, was found to comply with the standards prescribed in the British Pharmacopœia.

(3) *Biochemical.*

Thirty-one specimens of blood, blood serum, breast milk and urine were examined.

Of the four breast milks, one was satisfactory in chemical composition, two were low in non-fatty solids and lactose and the fourth, from a girl of sixteen with no pregnancy, was of high protein and ash content.

Two samples of blood serum were shown to be of normal protein content and two were examined for iron. Six samples of blood examined for lead showed that metal to be absent in three cases and 0.08, 0.17 and 0.286 mg. per 100 ml. in the others. The latter figure was abnormally high and was associated with a urine containing the abnormally high amount of 0.68 mg. of lead per 1,000 ml.

Seventeen specimens of urine were examined mainly for lead and copper. The lead figures ranged from 0.01 mg. to 0.15 mg. per litre, excluding the abnormal case mentioned above. The copper figures were from 0.05 mg. to 0.18 mg. per litre. One of the samples of urine was examined for arsenic with negative results and another for the presence of sulphonamides, when the equivalent of 2 mgrs. of sulphanilamide per 100 ml. was found.

A third urine was examined for Vitamin B1 using the thiochrome method. 170 mg. per 24 hour specimen of 585 ml. was found.

(4) *Toxicological.*

Twenty-three specimens were submitted for examination for the presence of noxious substances and these are summarised as follows:—

Two samples of breast milk were examined for the presence of phenobarbitone. The samples were from epileptics and it was thought that the babies of these mothers may have been affected by the drug. No evidence of the barbiturate was found in the milks, and we are inclined to the view that the drug does not reach the breast milk at least in detectable amounts. We hope to pursue this subject a little further if time permits.

Two specimens of liver from children were examined for phosphorus with negative results. In one chloroform and chloral were also absent.

The viscera of a fowl was free from arsenic, a pig's liver and a piece of pork contained no noxious substances and a venous blood gave no evidence of carbon monoxide.

A dead mouse was submitted together with a packet of egg powder. The egg powder was free from salmonella and other pathogens which might be toxic to mice. Actually the presence of phosphorus was demonstrated in the viscera of the mouse.

Four samples from a school were examined for zinc after an outbreak of illness with vomiting. A specimen of rhubarb and custard alleged to have been prepared in galvanised ware was found to contain 2,160 parts of zinc per million or equivalent to 66 grains per lb. of crystalline zinc sulphate. The British Pharmacopœia emetic dose of zinc sulphate is 10—30 grains. Thus it is hardly surprising that illness resulted from ingestion of the sweet. The original custard and the made-up preparation were found to contain 19 and 15 parts of zinc per million respectively. A specimen of gooseberry jam prepared at the school, also became suspect and was found to contain 222 parts of zinc per million.

This case of zinc poisoning is one more instance of the danger of cooking acid foods in galvanised vessels.

Lead poisoning was suspected in a farm tractor driver and involved the following specimens:—

Urine	...	...	Lead 0.38 mg./litre.
Drinking water	...	„	0.026 „ „
Soil	...	...	„ 25 parts per million of lead soluble in 5% acetic acid.
Fuel for tractor	...	„	12.5 mg./litre.

The amount of lead in the urine indicated lead intoxication and probably severe exposure. The soil and particularly the tractor fuel would appear to be contributory causes.

A case of suicide by coal gas poisoning involved three specimens. The presence of carbon monoxide was confirmed in the blood and traces of luminal were found in the stomach contents but no barbiturate was detected in the urine. The findings confirmed the belief that the drug had been taken prior to suicide.

Finally a sample of urine, alleged to give a false reaction with Fehlings solution, was examined. Certainly some substance reacting with Fehlings was present but was not a true reducing sugar. The patient was on a course of sedormid. Distillation of the urine revealed the presence of 0.048% of alcohol calculated as ethyl alcohol. It was thought possible that the actual alcohol may have been iso propyl alcohol resulting from the breakdown of the sedormid, but this was later discounted. The case is still under consideration pending improvement in the patient's general condition.

(5) *Health Department Samples.*

This subsection includes 25 samples bearing miscellaneous numbers and 17 directly designated as Chief Sanitary Inspector's samples. In the coming year the whole of this class of sample will be designated as District Sanitary Inspector's samples.

The miscellaneous section included samples of lignite, flies, a deposit from a drain, an uncooked lamb chop, a number of samples of cake and pudding mixtures, jams, vinegar, sweet pickle, meat and barley flakes.

The sample of lignite, Bovey coal was of some interest. Owing to lack of knowledge of the correct use of this type of fuel an unpleasant rubber-like smell developed on burning. The remedy appeared to be to stoke little and often to ensure adequate and rapid burning.

The specimen of flies consisted mainly of *musca autumnalis* and these flies behave in a manner similar to true cluster flies.

The cake and pudding mixtures were generally free from infestation although a few samples contained mite. Several were found to be musty and lacking in carbon dioxide.

The sample of vinegar contained cellular structures shown to be due to development of *Bacterium zylanicum* "mother of vinegar," one of the few organisms capable of synthesising cellulose.

The sample of sweet pickle had developed excessive mould growth due to two main causes, lack of a satisfactory concentration of acetic acid and probably undue exposure during preparation.

Three samples of barley flakes were found to be infested with tyroglyphids and ephestia.

The 17 samples from the Chief Sanitary Inspector included a number of specimens of canned products. Two of fruit salad were condemned for excessive amounts of tin. Two samples of canned apricots, one each of canned salmon, peas, meat and vegetables and lime juice were satisfactory.

One sample of bottled marinated fish, canned meat lunch, corned beef, cabbage, and milk were unsatisfactory.

A sample of canned orange juice was of particular interest and contained 1,400 parts of tin per million or 10 grains per lb., and the complaint of diarrhoea after eating was hardly surprising.

A sample of "points free" sweets consisted mainly of lactose and maltose with peppermint flavouring.

(6) *Ministry of Food.*

Nine samples of foodstuffs were examined for the Ministry as follows:—

Two samples of canned stewed steak showing evidence of carbon dioxide, but giving negative bacteriological findings.

Two samples of meat lunch, one with a burnt flavour, and the second giving evidence of rancid fat.

One sample of corned mutton in which the alleged presence of a hypochlorite disinfectant was unconfirmed.

One sample of tomato sausage, deficient in meat, but not specifically the subject of the Meat and Canned Foods Order.

Two samples of cake examined for fat, sugar and egg yolk solids under the Flour and Confectionery Order.

One sample of uncooked pastry giving no evidence of petroleum jelly.

(7) *Ministry of Food, Infestation Branch.*

Thirty-one samples of maize and three of barley were examined for the Ministry of Agriculture and Fisheries now designated as stated. The object of the work was to determine the moisture content of the cereals prior to fumigation. The figures ranged from 10.1 to 24.6 per cent. Samples giving moisture figures above 15.5 per cent. were excluded for the purposes of treatment.

(8) *Ministry of Fuel and Power.*

The Motor Spirit (Regulation) Act, 1948, came into operation on 1st July, 1948, and public analysts throughout the country were asked to co-operate in examining motor spirits taken under the Act.

A surprising number of samples, 26 to the end of the year, were examined and 24 were found to contain commercial petrol within the meaning of the Act.

The two samples found to be free from commercial spirit were also free from paraffin.

To date four cases have been heard, three involved fines of £257 and £100 and £5 with endorsement of driving licence. A fourth was dismissed as there appeared to be some doubt as to whether commercial spirit was present in the tank at the time of purchase of the vehicle.

Of the 26 samples examined, 10 were submitted by inspectors of the Ministry of Fuel and Power, 9 by the city police and 7 by the Wiltshire County Constabulary.

Fees charged to date for these examinations amounted to 78 guineas and two guineas analyst's fee in one case.

(9) *Corporation Contracts Department.*

It is gratifying that increasing use is being made of the laboratory for the purposes of checking contract supplies. Thirteen samples were examined as follows:

Two samples of custard powder were found to be satisfactory.

One sample of gelatine complied with the Edible Gelatine Order, but had very poor setting properties. A second sample of gelatine complied with the order in all respects except that the zinc content was 100 parts per million in excess of the permitted maximum.

Five samples of soap substitutes were sulphonated fatty alcohols and one a true liquid soap.

One sample of white soft soap was most unsatisfactory and bore little resemblance to soft soap of the British Pharmacopœia.

The remaining three samples included one of canned beetroot giving evidence of hydrogen swell and two food flavourings found to be out of condition.

(10) *Other Corporation Departments.*

Two samples of essences—Very potent flavours.

One sample of meat extract—Mainly vegetable extract.

Rat Repression Officer—

One sample of rat bait—Virus type of poison.

City Architect—

One sample of Clinker aggregate—No excessive soluble sulphate.

One sample of Clinker concrete blocks—No excessive soluble sulphate.

One sample of Paint Scrapings—No evidence of lead.

One sample of Concrete Slabs—Staining probably due to some unidentified impurity in sand drawn to the surface by the action of sunlight.

Port of Bristol Authority—

The sole of a boot subjected to attack by sulphuric acid.

Transport and Cleansing—

Two samples of Grit—Examined for salt content.

Three samples of Hydraulic Brake Fluid—One as a control and the other two found to be markedly acid.

Four samples of Petrol—Found to be satisfactory.

City Engineer—

One sample of Drillings from Cast Iron—Examined for carbon content.

(11) *Port Health.*

Fifty-one samples were examined principally for metallic contamination and the presence of sulphur dioxide. The number examined shows a renewal of activity, and it is expected that an increasing use will be made of the laboratory on behalf of the Port Health Authority.

The main samples of interest were as follows:—

One sample of dried apricots were found to be free from formalin and a sample of corned beef was free from excessive amounts of sodium nitrite or nitrate.

Twelve samples of apricot pulp were examined of which seven contained excessive amounts of sulphur dioxide. The actual quantities ranged from 1,640 to 2,740 parts per million. Three samples of pulp were free from sulphur dioxide and two others contained traces of tin.

Of seven samples of canned pears, four submitted as controls were satisfactory and 3 were unsatisfactory by virtue of the presence of appreciable amounts of tin and severe discolouration of the fruit.

A number of samples of tomato products were examined and these results are given in full in Table 16.

Table 16.*Copper on the dry basis*

Tomato Puree	59	parts	per	million	}	Satisfactory.
" "	...	...	50	"	"	"
" Juice	...	...	17	"	"	"
" "	...	...	21	"	"	"
" "	...	...	15	"	"	"
" "	43	"	"	"	}	Italian produce. Reported unsatisfactory for use in their present form or for manufacturing purposes.
" Paste	...	...	302	"	"	"
" "	...	...	112	"	"	"
" "	...	...	416	"	"	"
" "	...	...	203	"	"	"
" "	...	...	552	"	"	"
" "	610	"	"	"	}	Slightly above the permitted amount.
" Puree	...	...	125	"	"	"
" Sauce	3.4	"	"	"	}	On the original substance.
" Puree	...	...	44	"	"	"
" "	32	"	"	"	}	Satisfactory.
" "	...	...	34	"	"	"
" Paste	38	"	"	"	}	Satisfactory.
" "	...	...	34	"	"	"
" "	...	...	66	"	"	"

*Copper on the
dry basis*

Canned Tomatoes	Tin	0.2	grains/lb.	4.0	parts	per	million	}	Satisfactory.
" "	"	0.4	"	15.0	"	"	"		
" "	"	0.3	"	10.0	"	"	"		

It will be noted that apart from the batch of Italian Tomato paste these tomato products were satisfactory in respect of copper and tin contamination. The standard of 100 parts per million of Copper on the dry basis was used as the basis of assessment of the samples.

(12) *Special Examinations.*

(a) *Babies' Feeding Bottles.* Twelve bottles were examined to check the residual chlorine content after various stages of washing treatment. All the phases of washing treatment were shown to be satisfactory.

(b) Fourteen samples of raw milk were examined for the presence of fluorine. The samples were taken from various farms in and around the city including Brislington, Westbury, Avonmouth, Hallen, Brentry and Henbury. The range of fluorine was from 0.12 to 0.75 parts per million and no significance of distribution of the fluorine was noted, although the survey was not completed owing to lack of a particular chemical used in the assay process. It is hoped that the survey can be continued next year.

(c) *Examination of Teeth for Lead content.* An organic nervous disease known as disseminated sclerosis is common to the United Kingdom, Europe and the United States of America. The cause is still wholly unknown. It may well be infective in origin but behaves like no known infective disease. The family and personal history of the victim afford no clue to the cause. The disease attacks equally both sexes, usually between the ages of 20 and 40.

Patches of sclerosis variable in size establish themselves throughout the matter of the brain and spinal cord. The main signs are involuntary oscillatory movement of the eyeballs, leading to blindness and paralysis, uncertainty of action manifest only on voluntary movement, a mode of speech in which each syllable is pronounced over distinctly, while the emotional and intellectual life is altered and unbalanced.

The course of the disease is unpredictable although febrile diseases and pregnancy influence it adversely. Many remedies have been tried, but no real cure is known. Other nerve tracts may be conditioned to carry on the work of those destroyed.

It is known to be a relapsing and remitting disease and may be related to demyelinating diseases of animals, such as sway-back in sheep. This leads us to suspect that trace elements may be a possible etiological cause.

It was thought possible that lead may have some relationship to the disease. Lead is well known to affect the nervous system and the examination of bone material was considered as a possibility to be abandoned in favour of teeth, these being easier to obtain than specimens of bone. The work is still in progress but to the end of the year the work revealed an interesting state of affairs.

The normal subjects—

Average lead content per tooth in	13 men	47 parts per million
" " " " " "	20 women	57 " " "
" " " " " "	33 subjects	53 " " "

For disseminated sclerotics—

Average lead content per tooth in	11 men	97 parts per million
" " " " " "	15 women	100 " " "
" " " " " "	26 subjects	99 " " "

This is briefly the present position. It may be entirely fortuitous that the lead content of teeth in disseminated sclerotics is on the average approximately twice that in normals, but it would appear that the matter is worth following up.

(d) *Atmospheric Pollution.* Eight samples were examined in connection with atmospheric pollution, and these will be dealt with under section VIII of the report.

PART VII.

Gas Undertakings Acts, 1920—1934.

The work under the above Act has been carried out in accordance with the Special and Special (Supplementary) Prescriptions of the Ministry of Fuel and Power (Gas Testing Section).

The three electrical Fairweather calorimeters situated at the works of the Bristol Gas Company recorded the calorific value of the City's gas supply; only two non-recorder tests were made during the year.

The charts were verified by tests of calorific value made twice weekly at Avon Street, Stapleton Road, and Canons Marsh testing stations and subsequently averaged to give the daily deviation from the declared calorific value—which is, 460 B.Th.U. (gross) per cubic ft.

The gas supplied by the company for the four quarters of 1948, satisfied the requirements of the aforementioned prescription in respect of calorific value, pressure and purity.

PART VIII.

Atmospheric Pollution.

The year has been a particularly busy one in the measurement of pollution as is evidenced by estimations made, 377 as compared with 96 in 1947. The table summarises the estimations made.

Table 17.

Deposit Gauges	...	...	...	...	49
Lead peroxide for sulphur	...	...	...	...	173
Special examinations for zinc and fluorine	...				8
Continuous smoke and sulphur dioxide estimations					178
					<hr/> 408 <hr/>

The City.

Of the four city stations only three were operating for the full year. Difficulties in securing apparatus made it impossible to replace the Blaise site after the destruction by hooligans of the equipment at the top of Blaise Castle. An alternative site was selected later which it is hoped will be less conspicuous and hence less liable to such depredations. The site was eventually established on 1st August.

The pollution is measured by the collection and analysis of the soluble and insoluble matter which is deposited from the air in a deposit gauge and which consists of a large glass bowl of known area, connected with a glass reservoir. Each reservoir is replaced by a clean one on or about the last day of the month. As a precaution each station is inspected about the 20th of each month, particularly after heavy rainfall.

The monthly results with totals for the year are shown in the tables in tons per square mile, and are also shown graphically. The graph indicates clearly the degree of pollution and shows the seasonal peaks in the winter months.

Besides the deposit gauges these sites are provided with cylinders of lead peroxide mounted in louvered boxes, for the purpose of measuring the sulphur dioxide in the atmosphere. The figures in general give a similar picture of the degree of pollution as do the deposit gauge figures.

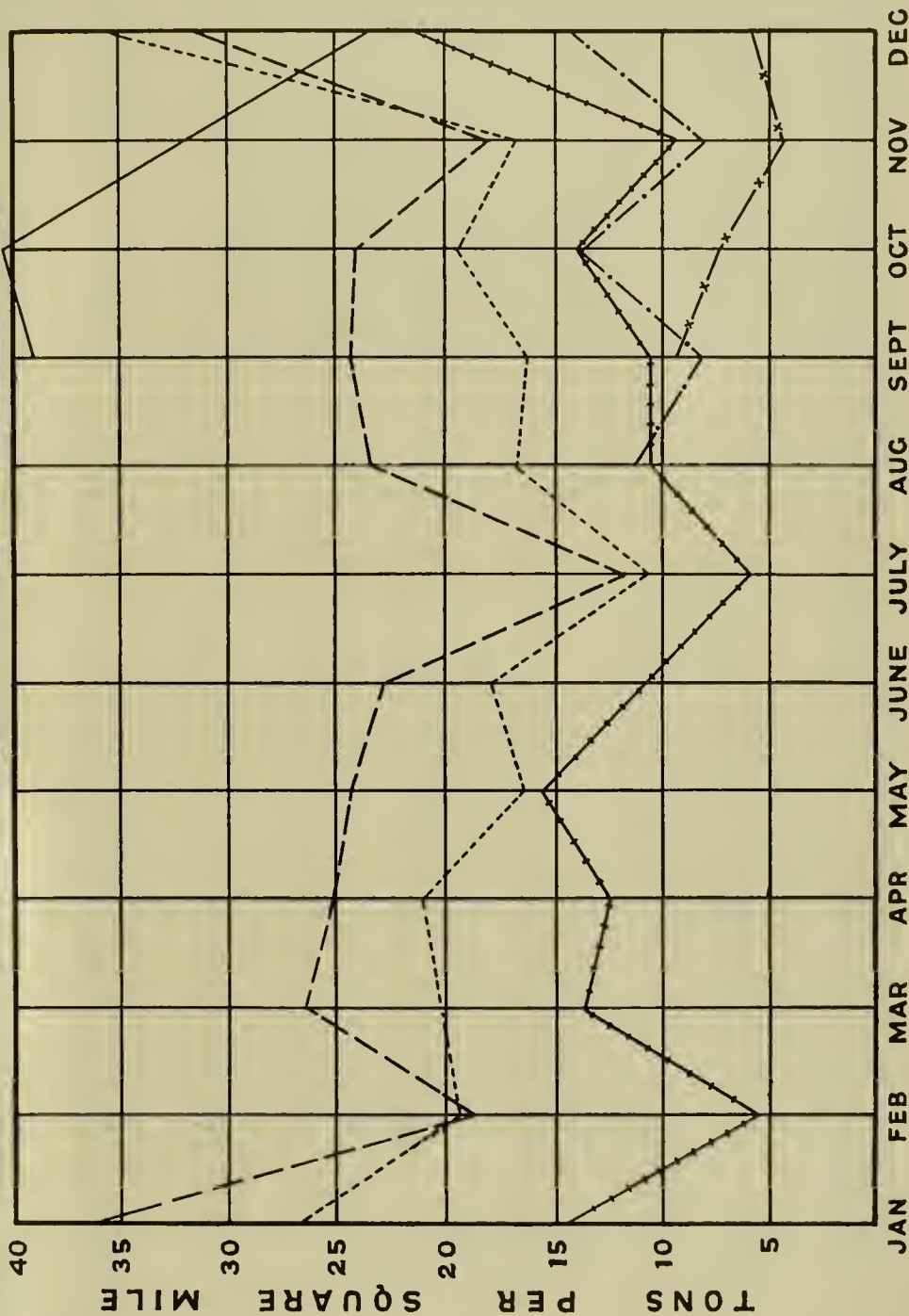
Continuous smoke and sulphur dioxide recordings.

In January the Department of Scientific and Industrial Research asked if the laboratory would assist in a survey being made on behalf of the Medical Research Council. That Council had initiated an inquiry into the apparent increase of cancer of the lung which has taken place in England and Wales during the last twenty years. This increase may either be an apparent one only, due to improved methods of diagnosis by X-rays and by other means, or may be due to an actual increase in the number of cases which occur. Atmospheric pollution naturally suggests itself as a possible factor and the Council was arranging for samples of dust in a number of towns to be examined for arsenic, coal tar and especially one of its derivatives, and radio-activity. The work is in the early stage as the analytical methods used require very careful examination in their application to the detection of exceeding small quantities.

The apparatus used in the laboratory was that recommended by the Department of Scientific and Industrial Research and was set up at Canynge Hall as a matter of convenience since it required daily attention at a particular hour.

ATMOSPHERIC POLLUTION 1948

TOTAL SOLID MATTER (SUSPENDED & DISSOLVED)



KEY

- SHAFTESBURY CRUSADE
- ZOOLOGICAL GARDENS
- WATER WORKS
- BLAISE CASTLE
- PORTISHEAD DOCK
- MEADOW FARM

The apparatus is so designed that an estimate of the weight of smoke in mgrms. per 100 cubic feet of air can be made together with a record of the amount of sulphur dioxide in parts per million. The smoke deposits on special filter papers ranged from 1.0 to 32.0 mgrms. of smoke per 100 cubic feet of air in a period of 24 hours. These papers were collected daily and submitted in batches each month as directed by the Department of Scientific and Industrial Research.

The amount of sulphur dioxide ranged from nil to 0.175 parts per million. A total of 178 observations was made. The first meter used for determining the volume of air was shown to be unsatisfactory at low rates of flow and observations were continued with an improved type of meter loaned to the department by the Bristol Gas Company, and my best thanks are due to the chief chemist of the company for his kind co-operation. In September however, the company were forced to recall the meter for urgent work and the laboratory was unable to secure a replacement. It is hoped, however, that arrangements can be made to re-start the survey in the near future.

YEAR 1948.
Composition of solids collected in deposit gauge at Blaise Castle, Henbury, 1/2 tons per square mile.
Table 18.

Month	Rainfall in inches	Total Solid matter (suspended and dissolved)	Insoluble solid matter			Total dissolved matter	Sulphate (as SO ₄)	Chlorine (Cl.)	Lime (Ca)
			Tar	Carbonaceous matter other than tar	Mineral matter (ash)				
August ...	3.66	11.41	0.11	2.32	2.52	6.46	2.40	0.79	0.37
September ...	2.61	8.00	0.02	1.79	1.92	4.27	0.59	0.54	0.15
October ...	4.18	14.24	0.14	1.18	1.27	11.65	3.05	0.79	0.47
November ...	1.62	7.71	0.06	0.75	0.64	6.26	1.76	0.74	0.39
December ...	3.86	13.90	0.11	1.16	1.25	11.38	5.05	2.54	0.66
Totals (for 5 months) 1948	15.93	55.26	0.44	7.20	7.60	40.02	12.85	5.40	2.04
Mean monthly deposit ...	3.19	11.05	0.09	1.44	1.52	8.00	2.57	1.08	0.41

Table 19.

Month	Rainfall in inches	Total Solid matter (suspended and dissolved)	Insoluble solid matter			Total dissolved matter	Sulphate (as SO ₄)	Chlorine (Cl.)	Lime (Ca)
			Tar	Carbonace- ous matter other than tar	Mineral matter (ash)				
January	5.44	36.48	0.20	10.85	9.49	15.94	3.56	2.39	1.90
February	1.70	18.72	0.15	4.51	4.77	9.29	5.58	1.85	0.83
March	1.47	26.90	0.23	6.84	8.39	11.44	5.19	1.19	0.88
April	1.77	25.26	0.40	6.05	6.93	11.88	3.35	1.90	1.23
May	4.10	24.90	0.15	6.97	7.96	9.82	3.32	0.93	0.86
June	2.15	22.69	0.27	6.04	6.43	9.95	3.65	1.48	1.36
July	0.62	11.09	0.11	3.57	3.43	3.98	1.43	0.73	0.47
August	3.79	23.43	0.16	6.34	8.11	8.82	2.66	1.13	0.56
September	2.20	24.22	0.12	6.59	7.73	9.78	3.12	1.06	0.90
October	3.43	23.98	0.18	6.47	8.11	9.22	3.04	1.33	0.71
November	1.54	17.51	0.23	4.98	4.73	7.57	6.35	0.73	0.29
December	4.20	31.61	0.37	8.36	6.08	16.80	5.69	3.25	1.18
Totals for the year 1948	32.41	286.79	2.57	77.57	82.16	124.49	46.94	17.97	11.17
Mean monthly deposit	2.70	23.90	0.21	6.46	6.85	10.37	3.91	1.50	0.93

YEAR 1948.
Composition of solids collected in deposit gauge at Bristol Water Works building, Marsh Street, in tons per square mile.
Table 20.

Month	Rainfall in inches	Total Solid matter (suspended and dissolved)	Insoluble solid matter			Total dissolved matter	Sulphate (as SO ₄)	Chlorine (Cl.)	Lime (Ca)
			Tar	Carbonaceous matter other than tar	Mineral matter (ash)				
January ...	5.79	26.86	0.18	6.94	8.62	11.12	3.77	2.43	1.52
February ...	1.92	19.42	0.18	5.24	5.17	8.83	3.35	1.57	1.72
March ...	1.86	20.92	0.19	6.77	7.09	6.87	3.54	1.50	1.10
April ...	1.92	21.49	0.18	6.42	7.48	7.41	2.15	1.35	0.80
May ...	4.16	16.60	0.12	4.90	4.84	6.74	1.38	0.37	0.45
June ...	2.32	17.63	0.21	4.26	5.98	7.18	1.83	1.15	0.88
July ...	0.88	10.15	0.14	3.06	3.51	3.44	0.73	0.54	0.43
August ...	3.64	16.94	0.26	4.51	5.30	6.87	5.50	0.59	0.15
September ..	2.55	16.63	0.20	4.97	5.26	6.20	5.27	0.47	0.07
October ...	3.90	19.39	0.34	5.98	5.93	7.14	4.50	0.83	0.92
November ...	1.72	16.58	0.16	4.34	5.41	6.67	2.36	1.08	0.87
December ...	5.20	34.98	0.68	6.27	6.47	21.56	5.71	3.03	1.81
Totals for the year 1948 ...	35.86	237.59	2.84	63.66	71.06	100.03	40.09	14.91	10.72
Mean monthly deposit ..	2.99	19.80	0.24	5.31	5.92	8.34	3.34	1.24	0.89

YEAR 1948.
Composition of solids collected in deposit gauge at Zoological Gardens, Clifton, in tons per square mile.
Table 21.

Month	Rainfall in inches	Total Solid matter (suspended and dissolved)	Insoluble solid matter			Total dissolved matter	Sulphate (as SO ₄)	Chlorine (Cl.)	Lime (Ca)
			Tar	Carbonaceous matter other than tar	Mineral matter (ash)				
January	6.37	14.22	0.12	1.65	0.87	11.58	4.65	1.76	0.66
February	2.16	6.04	0.04	0.52	0.64	4.84	1.56	1.42	0.15
March	2.33	13.65	0.12	2.63	2.70	8.20	3.00	1.22	0.14
April	2.33	11.95	0.09	1.74	2.20	7.92	1.64	1.35	0.15
May	4.42	15.87	0.14	4.74	2.32	8.67	1.01	0.61	0.43
June	2.09	10.62	0.20	2.14	2.39	5.89	1.23	0.61	0.39
July	1.12	6.26	0.21	0.80	1.64	3.61	0.67	0.24	0.38
August	4.33	10.47	0.12	1.48	1.69	7.18	1.26	0.81	0.29
September	3.14	10.57	0.07	1.33	1.72	7.45	1.06	0.98	0.30
October	4.65	13.71	0.18	1.49	1.75	10.29	2.56	0.74	0.43
November	2.09	9.02	0.10	1.61	1.89	5.42	2.03	0.71	0.47
December	4.96	21.03	0.05	2.39	2.51	16.08	5.30	2.57	1.38
Totals for the year 1948	39.99	143.41	1.44	22.52	22.32	97.13	25.97	13.02	5.17
Mean monthly deposit	3.34	11.95	0.12	1.88	1.86	8.09	2.16	1.09	0.43

YEAR 1948.
Composition of solids collected in deposit gauge at Portishead Docks, in tons per square mile.
Table 22.

Month	Rainfall in inches	Total solid matter (suspended and dissolved)	Insoluble solid matter			Total dissolved matter	Sulphate (as SO ₄)	Chlorine (Cl)	Line (Ca)
			Tar	Carbonaceous matter other than tar	Mineral matter (ash)				
September ...	2.06	38.84	0.24	7.33	22.83	8.44	3.51	1.33	1.21
October ...	4.54	40.57	0.42	12.65	17.15	10.35	6.03	1.23	2.43
November ...	1.51	31.51	0.27	9.49	14.77	6.98	2.94	0.81	0.72
December ...	3.61	23.78	1.24	7.20	11.74	4.60	2.70	0.75	0.63
Totals (for 4 months) 1948	11.72	134.70	2.17	36.67	66.49	30.37	15.18	4.12	4.99
Mean monthly deposit ...	2.93	33.68	0.54	9.17	16.62	7.59	3.80	1.03	1.25

YEAR 1948.
Composition of solids collected in deposit gauge at Meadow Farm, Portishead in tons per square mile.
Table 23.

Month	Rainfall in inches	Total Solid matter (suspended and dissolved)	Insoluble solid matter			Total dissolved matter	Sulphate (SO ₄)	Chlorine (Cl)	Lime (Ca)
			Tar	Carbonace- ous matter other than tar	Mineral matter (ash)				
September ...	2.76	9.64	0.12	5.03	0.74	3.75	1.50	0.80	0.84
October ...	4.14	7.41	0.25	0.49	1.04	5.63	1.11	0.74	1.43
November ...	1.70	4.63	0.27	0.34	0.60	3.42	1.52	0.70	0.48
December ...	4.10	5.83	0.03	0.19	2.76	2.85	0.55	0.34	0.29
Totals (for 4 months) 1948	12.70	27.51	0.67	6.05	5.14	15.65	4.68	2.58	3.04
Mean monthly deposit ...	3.18	6.88	0.17	1.51	1.29	3.91	1.67	0.65	0.76

The Avonmouth Area.

It was agreed in 1947 at a meeting of the Medical Officer of Health, the City Engineer, the Chief Sanitary Inspector and your Analyst, that information upon pollution in the Avonmouth area would be useful in a number of connections.

At the time the main consideration was the projected establishment of a Meat Precinct, a scheme since temporarily shelved. With the growth of the Kingsweston Housing estate, however, it was thought that the survey might usefully be continued.

In 1947 figures for six months estimations of sulphur dioxide pollution were submitted in the annual report with little comment as it was considered that a full year's operation would yield a more comprehensive picture.

The tables, herewith, give the sulphur dioxide figures for a period of eighteen months. It should be noted that a change had to be made in one site in 1947, when the St. Andrew's Cold Store location was abandoned in favour of a site in the Docks near the St. Andrew's Station.

Throughout the period of fourteen months the Avonmouth Dock site has shown the heaviest pollution. The location is within a quarter of a mile and south-west of the Smelting Company's works; so that pollution by sulphur dioxide is heavy in a circle of a half mile diameter.

Moorhouse Farm, $1\frac{1}{2}$ miles due east, and Green Splot Farm, $1\frac{1}{4}$ miles north-east of the works have for the most part shared positions two and three with respect to the heaviest pollution. In general this pollution is about half the heaviest figure at the Docks. These two sites are in the general direction west and south-west prevailing winds.

The sites at Campbell Farm and T Farm have shared fourth and fifth positions in respect of the heaviest pollution. Campbell Farm is $1\frac{1}{2}$ miles south-east and T Farm about 1 mile south of the Smelting works. It would therefore appear that the Kingsweston estate is not likely to be seriously affected by pollution from the works as judged by the sulphur dioxide figures. It will be seen that in 1947 the pollution figures rose steadily from August to December, reaching a maximum in that month, falling steadily again till May, 1948. From August to December, 1948, it was almost stationary at 0.6 mgrm., a figure approximating to conditions around the Zoological Gardens.

Polar diagrams have been constructed to correlate wind direction, duration and intensity.

In this survey and that of Portishead there is a well marked connection between these factors and the intensity of sulphur dioxide pollution.

In September it became possible to establish two deposit gauges and the best and worst sites were selected. Having regard to the type of work carried out in the area, a particular search was made for zinc and fluorine pollution. The Dock area received appreciable amounts of both zinc and fluorine in the course of a month and both amounts rose sharply from September to December.

Even at T Farm significant amounts of zinc and fluorine were found, although not so large as at the Docks.

The Table 27 gives the figures for zinc and fluorine expressed in terms of those elements in tons per square mile per month compared with findings at the Zoological Gardens.

Domestic fires account for traces of fluorine, but the survey, admittedly of very brief duration, shows appreciably higher figures in the Dock area and at certain times at the T Farm site.

Examination of the deposit gauge rainfall may not be the most suitable method of determining the fluorine content of the atmosphere and it may be necessary to follow the methods adopted in a survey made by the Medical Research Council upon Industrial Fluorosis.

The Report of the Council was published in February, 1949, and is a study of the Hazard of Fluorine to Man and Animals near Fort William, Scotland. In the conclusion to this Report the following is quoted: "It is more difficult to speak

with certainty about the risk to human health outside the factory. Examination of samples of air, soil, etc., establishes beyond doubt that the amount of fluorine liberated from the factory is very considerable. On account of the configuration of the country, the direction of the prevailing winds, and the heavy rainfall, fluorine compounds in the atmosphere tend to be deposited, in the main, along a tract of country which can be defined in the light of the analytical results. The extent of the area affected may, of course, vary in time with changing circumstances, but information of this type ought to be of value in planning new developments, for, while clinical examination of a small number of residents in the neighbourhood of the factory has shown no sign of injury to health, it is only prudent to site new developments in such a way that, so far as possible, residents are kept out of the zone known to be most liable to contamination.

The effects on animal husbandry of fluorine contamination of herbage have been described in detail. They obviously constitute a serious impediment to economic methods of sheep and cattle farming in the area.

It is important that everything practicable should be done to reduce the amount of fluorine discharged from the factory."

It may be questioned whether zinc is particularly toxic, but its cumulative effects over years may be very marked.

The effects of traces of fluorine are not yet fully known. Something is known of the effects of fluorides in waters in connection with the growth of teeth and it would appear that the human body is very delicately balanced in its requirements of fluorine.

Further, recently restrictive legislation has been applied to the amounts of fluoride which are to be tolerated in certain foodstuffs.

There is no doubt therefore, that both of these elements are suspect and that amounts in the air we breathe should be kept to an absolute minimum. There is, of course, no reason why a pure air should contain either of these elements.

It is hoped that the survey will be continued preferably with modified apparatus for the fluorine estimation and moreover further work will be necessary to determine the particular form in which the zinc and fluorine are deposited.

Only three of the Avonmouth sites are to be kept operating since the information provided by two of the original five is largely duplicated.

Table 24.
AVONMOUTH (July to December, 1947).
Sulphur by Lead Peroxide.
Weight of SO₃ in mgr. per 100 sq. cm. per day.

Site No.	Site	July		Aug.		Sept.		Oct.		Nov.		Dec.	
5	Campbell Farm	... 0.29	4	0.17	5	0.49	3	0.34	5	0.68	5	0.92	4
6	T Farm	... 0.17	5	0.32	2	0.50	2	0.56	4	0.75	4	1.28	2
7	Green Splot Farm	... 0.37	3	0.20	4	0.47	4	0.64	2	1.08	2	0.88	5
8	Moorhouse Farm	... 0.71	2	0.30	3	0.44	5	0.61	3	0.86	3	1.22	3
9	Avonmouth Dock	... —		—		—		—		1.38	1	2.20	1
	St. Andrew's Cold Store	... 1.76	1	4.08	1	site abandoned							

Table 25.

Sulphur by Lead Peroxide.

Weight of SO₃ in mgr. per 100 sq. cm. per day.

AVONMOUTH (1948).

Site No.	Site	Jan.		Feb.		March		April		May		June	
5	Campbell Farm ...	0.79	5	0.58	5	0.60	5	0.59	5	0.33	5	0.78	3
6	T Farm ...	0.84	4	0.69	4	0.81	4	0.66	4	0.51	2	0.59	4
7	Green Splot Farm ...	1.34	2	0.91	3	0.87	2	0.68	3	0.43	4	0.56	5
8	Moorhouse Farm ...	1.12	3	0.93	2	0.83	3	0.92	2	0.48	3	1.06	2
9	Avonmouth Dock ...	2.39	1	3.81	1	3.08	1	2.78	1	3.51	1	2.41	1

Site No.	Site	July		Aug.		Sept.		Oct.		Nov.		Dec.	
5	Campbell Farm ...	0.52	4	0.46	5	0.53	5	0.62	5	0.58	5	0.58	5
6	T Farm ...	0.62	3	0.47	4	0.53	4	0.63	4	0.73	4	0.65	4
7	Green Splot Farm ...	0.40	5	0.51	3	0.74	3	0.88	2	1.01	2	0.98	2
8	Moorhouse Farm ...	0.72	2	0.85	2	0.84	2	0.77	3	0.90	3	0.80	3
9	Avonmouth Dock ...	1.50	1	1.44	1	1.97	1	2.55	1	2.22	1	3.25	1

Table 26.

Special examination for Zinc and Fluorine in Deposit Gauges.

	Sept.	Oct.	Nov.	Dec.
<i>Avonmouth Dock—</i>				
Rainfall in litres ...	4.20	7.00	2.70	7.30
Zinc mgrs./month ...	42.80	49.00	70.50	151.80
Fluorine mgrs./month ...	2.27	2.59	10.50	11.80
<i>T Farm</i>				
Rainfall in litres ...	4.85	7.30	2.40	7.15
Zinc mgrs./month ...	17.90	33.60	10.60	28.60
Fluorine mgrs./month ...	0.58	2.26	0.70	0.80

Table 27.

Tons per square mile, per month (1948).

	Sept.	Oct.	Nov.	Dec.	Jan.
Avonmouth Dock—					
Rainfall in inches	2.25	3.76	1.44	3.91	0.80
Zinc	1.52	1.70	2.45	5.24	0.83
Fluorine	0.08	0.09	0.36	0.40	0.08
T Farm—					
Rainfall in inches	2.58	3.84	1.28	3.80	0.77
Zinc	0.60	1.12	0.36	0.92	0.41
Fluorine	0.02	0.08	0.02	0.03	0.04
Zoological Gardens—					
Rainfall in inches					0.68
Zinc					0.16
Fluorine					0.02

NOTE—Zinc probably occurs as ZnO (81/65 x zinc figures) or Zinc chloride (126/65 x zinc figures).

Fluorine probably occurs as NaF (42/19 x Fluorine figures) or H₂SiF₆ (144/19 x Fluorine figures).

The Portishead Area.

Observations on one year's survey.

Following complaints of serious grit nuisance at Portishead—due to the presence of the electricity generating station—an agreement was reached between the Urban District Authority and the Bristol City Health Committee to initiate an investigation into the pollution of the atmosphere of that area.

It was decided that a minimum of six stations, each with a deposit gauge and sulphur dioxide cylinder would be necessary, and these were to be sited so as to encircle the source of pollution in order to gain information of the extent of the nuisance.

Owing to the difficulty of supply of deposit gauges, it was only possible at first to establish lead peroxide cylinders for the determination of sulphur pollution, and it was not until September that two deposit gauges for the collection of soot, tar and grit were installed.

The table lists the sites which were used for sulphur pollution determination, while the deposit gauges were placed one at the Docks and the other at the Downs Road site.

Obviously it will not be possible to give a complete picture of the pollution, owing to the lack of apparatus, but it is felt that the sulphur pollution figures will nevertheless indicate the main tendencies which the deposit gauges may be expected to confirm.

Sulphur dioxide, being in the form of gas, will travel more freely and be far less subject to gravitational attraction than discrete particles of soot and grit, so that the sulphur figures may be expected to delineate the boundaries of pollution, and any grit nuisance will not extend over a greater area than the gaseous pollution.

The general inferences to be derived from the figures in the table are these:—

The Dock area has, with the one exception in May, consistently shown the heaviest figures for sulphur pollution, while the next heavy pollution was at the Power Station site.

As the prevailing wind direction is from the Power Station out to sea, then the Dock area would be expected to be subject to this heavy pollution.

The exceptions to the general conclusion may well be due to a general change in wind direction.

The Downs Road and High Street sites have in general occupied the fifth and sixth positions, that is, these two sites have suffered the least pollution. The cleanliness of the air at the Beach Road sites has been variable through the year, but generally these two sites were midway between the cleanest and dirtiest sites.

It will be noticed that the pollution at the Docks site is very heavy compared with the other sites—due to its close proximity to the source of pollution and to the prevailing wind.

Ranges of Sulphur pollution over the year (mg. of Sulphur trioxide per 100 sq. cm. per day).

	Highest	Lowest
Portishead Dock ...	4.61 June	1.71 Dec.
Power Station ...	2.68 Feb.	0.25 Sept.
Downs Road ...	1.00 Feb.	0.20 Sept.
High Street ...	0.87 Feb.	0.17 Sept.
Beach Road ...	2.03 Feb.	0.15 Sept.
South Road ...	1.44 Dec.	0.17 Sept.

September thus appears in five of the locations to be the month of the best conditions, and February, for four locations, to be the worst month.

The results of four months observations with the deposit gauges are also appended, and they support the general conclusions.

It is perhaps, premature to make dogmatic statements regarding the extent of the pollution on what is at present insufficient evidence.

The grit nuisance is in general due to the use of rather low chimneys at the Power Station, but, as has been stated, the prevailing wind tends to take the grit away from the town in the direction of the sea.

The average figure for the High Street site for the year, is distinctly lower than that for the Zoological Gardens, Bristol, which is in a residential area where the pollution is due only to domestic chimneys.

It was considered, after a year's observations, that the High Street and Beach Road sites did not materially contribute to the information supplied by the remaining sites, and they were accordingly abandoned, and the apparatus removed, on December 31st, 1948.

It will be necessary to reconsider the problem after at least a year's experience with the deposit gauges, as by then the new chimney stack under construction will probably be in use, and this will supplant the smaller stacks.

If this is so, a decided improvement can be expected to take place.

Table 28.
Composition of solids in deposit gauge in tons per square mile.

Portishead Dock.

Month	Rainfall in inches	Total Solid matter (suspended and dissolved)	Insoluble solid matter			Total dissolved matter	Sulphate (as SO ₄)	Chlorine (Cl.)	Lime (Ca)
			Tar	Carbonace- ous matter other than tar	Mineral matter ash				
September ...	2.06	38.84	0.24	7.33	22.83	8.44	3.51	1.33	1.21
October ...	4.54	40.57	0.42	12.65	17.15	10.35	6.03	1.23	2.43
November ...	1.51	31.51	0.27	9.49	14.77	6.98	2.94	0.81	0.72
December ...	3.61	23.78	0.24	7.20	11.74	4.60	2.70	0.75	0.63
Total for 4 months ...	11.72	134.70	1.17	36.69	66.49	30.37	15.18	4.12	5.09
Mean monthly deposit ...	2.93	33.67	0.29	9.17	16.62	7.59	3.79	1.03	1.27
<div>26.08</div>									
" Meadows " Downs Road.									
September ...	2.76	9.69	0.12	5.03	0.74	3.75	1.50	0.80	0.84
October ...	4.14	7.41	0.25	0.49	1.04	5.63	1.11	0.74	1.43
November ...	1.70	4.63	0.27	0.34	0.60	3.42	1.52	0.70	0.48
December ...	4.10	5.83	0.03	0.19	2.76	2.85	0.55	0.34	0.29
Total for 4 months ...	12.70	27.51	0.67	6.05	5.14	15.65	4.68	2.58	3.24
Mean monthly deposit ...	3.17	6.88	0.17	1.51	1.28	3.91	1.17	0.64	0.81
<div>2.96</div>									

Table 29.

Sulphur by Lead Peroxide.Weight of SO₃ in mgr. per 100 sq. cm. per day.**Portishead.**

Site No.	Site	Jan.		Feb.		March		April		May		June	
		*											
10	South Road ...	1.04	3	0.75	6	0.75	4	0.47	6	0.46	6	0.19	6
11	Beach Road ...	0.58	4	2.03	3	0.64	5	0.61	3	0.97	3	0.28	3
12	High Street ...	0.53	5	0.87	5	0.54	6	0.56	4	0.61	5	0.28	3
13	Downs Road, near Radio Station	0.38	6	1.00	4	0.78	3	0.55	5	0.63	4	0.23	5
14	Portishead Dock ...	3.58	1	3.20	1	3.35	1	2.84	1	1.92	2	4.61	1
15	Power Station ...	1.47	2	2.68	2	0.88	2	1.53	2	2.19	1	0.50	2

Site No.	Site	July		Aug.		Sept.		Oct.		Nov.		Dec.	
10	South Road ...	0.20	6	0.22	3	0.17	4	0.60	4	0.68	4	1.44	2
11	Beach Road ...	0.22	5	0.19	5	0.15	6	1.12	3	0.75	3	1.20	4
12	High Street ...	0.25	4	0.18	6	0.17	4	0.37	6	0.49	6	0.54	6
13	Downs Road, near Radio Station	0.31	3	0.21	4	0.20	3	0.51	5	0.60	5	0.86	5
14	Portishead Dock ...	3.39	1	3.75	1	3.65	1	2.72	1	2.00	1	1.71	1
15	Power Station ...	0.56	2	0.31	2	0.25	2	1.37	2	1.36	2	1.04	3

* The numerals in this column indicate the relative positions of the six sites. Thus 1 indicates the heaviest and 6 the least amounts of sulphur trioxide in any one month.

PART IX.**Metals in Foods.**

In January, 1948, the Minister of Food announced the appointment of a Food Standards Committee and that Committee has now set up a Sub-Committee on metallic contamination of foods with an invitation to consider:—

1. The available evidence of the effect of ingestion of foods contaminated with metals and other injurious elements,
2. The possibility of prescribing limits of contamination; and
3. The technological problems which might arise from the prescription of such limits.

Information was requested concerning copper, lead, arsenic, tin, zinc, fluorine, antimony and aluminium for the two years 1947 and 1948, and for the first six elements the results obtained with a variety of foods examined in this laboratory are embodied in the tables which follow. No specific examinations were made for aluminium and in three cases the Reinsch test sufficed to exclude the presence of antimony.

TABLE 30.
Data on Metals in Foods (1947-1948)
COPPER.

Food Analysed	No. of samples	% Dry Solids in sample	Parts per million calculated on * (a) the sample; (b) the dry solids						
			0—5	6—10	11—20	21—30	31—40	41—50	—50
Canned Peaches	3	sample	3						
" Apricots	2		1	1					
" Beans	2				1				
" Meat and Vegetables	1								
Beer	24	sample	22	2					
Cider	21	"	16	4	1				
Gelatine	23	"	6	6	6	4		1	
Tomato Ketchup	3	"	2	1					
Tomato Sauce	3	"	2						
Canned Peas	2	"	1		1				
Curry Powder	4	sample	4	1					
Spaghetti in Tomato Sauce	1	"	1						
Canned Mutton	1	"	1						
Custard	1	"	1						
" Uncooked	1	"	1						
Tomato Puree	6	dry basis							2
Juice	4	" sample	2		2	1	2	1	
Ice Lollies	2	"							
Golden Plum Pudding	1	"		1					
Tomato Paste	9	dry basis			1		2		6
Tomatoes Canned	3	sample	1	1					
Prunes Cooked	1	"	1						
" Raw	1	"							
Jam	1	"		1					
Concentrated Pea Soup	1	dry basis							1
Canned Fruit Salad	2	sample			2				
Chopped Pork and Egg Yolks	1			1	1				

TABLE 31.
Data on Metals in Foods (1947-1948).
LEAD.

Food Analysed	No. of samples	% Dry Solids in sample	Parts per million calculated on * (a) the sample; (b) the dry solids					
			0—2	3—5	6—10	11—15	16—20	21—25
Curry Powder	20	sample	9	4	2	2		1
Beer	20	"	20					
Cider	17	"	16					
Gelatine	23	"	14	5	4			
Canned Peas	2	"	1	1				
Flour	3	"	3	(stacked near lead oxide)				
Evaporated Milk	29	"	29					
Canned Lime Juice	1	"		1				
Marmalade	1	"	1					
Spaghetti	1	"		1				
Canned Mutton	1	"						
Ice Cream	1	"					1	
" Lollies	2	"	2	1 (From bearing metal)				
Canned Meat and Vegetables	1	"		1				
Melon and Ginger Jam	1	"	1					

TABLE 32.
Data on Metals in Foods (1947-1948).
ARSENIC.

Food Analysed	No. of samples	% Dry Solids in sample	Parts per million calculated on * (a) the sample; (b) the dry solids					
			0—2	3—5	6—10	11—15	16—20	21—25
Peppermint Sweets	1	sample	1					
Gelatine	14	"	14					
Meat	1	"	1					
Curry Powder	11	"	11					
Beer	24	"	24					
Cider	21	"	21					
Vinegar	36	"	36					
Cocoa	8	"	8					
Gelatine	8	"	8					

TABLE 33.
Data on Metals in Foods (1947-1948).
TIN.

Food Analysed	No. of samples	% Dry Solids in sample	Parts per million calculated on * (a) the sample; (b) the dry solids					
			0—50	51—100	101—150	151—200	201—250	—250
Chopped Pork and Egg Yolks	1	sample	1					
Cuavas in Syrup ...	1	"		1				
Melon and Ginger Jam	1	"				1		
Stewed Steak ...	3	"			1	1		
Canned Plums	1	"		1				
Meat Lunch ...	1	"						
Spaghetti in Tomato Sauce	1	"		1				
Blackberry and Apple Jelly	1	"						
Damson Jelly	1	"						
Bread ...	1	"						
Canned Mutton	1	"			1			
" Marmalade ...	1	"						
" Blackcurrant Jam	1	"						
" Melon and Lemon	1	"		1				
" Apricots	4	"	2		1	1		
" Plum	1	"		1				
Pilchards in Tomato Sauce	1	"						
Apricot Pulp ...	2	"		1				
Canned Pears	2	"	1				1	
" Green Beans	2	"	1					
" Beetroot in Vinegar	1	"	2					
" Tomatoes	3	"	1					
" Peas ...	2	"	2					
" Macaroni and Cheese	1	"				1		
" Pork Sausages	2	"		1		1		
" Fish Gelatine Roll	1	"	1					
Prunes	2	"	2					
Canned Peaches	3	"	3					
" Milk	2	"	2					
" Lime Juice	2	"		2				2
" Fruit Salad	2	"						1
" Orange Juice	1	"						

TABLE 34.

Data on Metals in Foods (1947-1948).

ZINC.

Food Analysed	No. of samples	% Dry Solids in sample	Parts per million calculated on * (a) the Sample (b) the Dry Solids			
			0—25	26—50	51—100	—100
Gelatine ...	26	sample	12	7	6	1
Curry Powder ...	4	"	4 (nil)			
Canned Fruit ...	4	"	4 (nil)			
Rhubarb and Custard (cooked in galvanised vessels)	1	"				1
Made-up Custard ...	1	"	1			
Custard ...	1	"	1			
Gooseberry Jam ...	1	"				1
Canned Peas ...	1	"	1			
Prunes ...	1	"	1			
Canned Stringless Beans	2	"	2			
Canned Peaches ...	2	"	2			

TABLE 35.
Metals in Foods.
FLUORINE.

Food Analysed	No. of samples	% Dry Solids in sample	Parts per million calculated on * (a) the sample; (b) the dry solids					
			0—1	2—5	6—10	11—50	51—100	101—200 Over 200
Baking Powder ...	8	sample		4	4			
Golden-Raising Powder ...	4	"		4				
Beer ...	4	"	4					
Milk, raw ...	14	"	14					
Water—								
4 main supplies to City ...			0.052 0.066 0.142 0.181	{ Jan. 1947 }				

Appendix VI

HEALTH DEPARTMENT SURVEYS

By Dr. R. C. WOFINDEN, Deputy M.O.H., City and County of Bristol.

Health departments have long been aware of the need for enquiry and research into the many public health problems that remain unsolved. From time to time, enquiries have been undertaken as a result of which new and important administrative arrangements have been made, but the Medical Officer of Health has only been able to spend a limited amount of time on such work. Now that the National Health Service Act of 1946 has taken away from health departments many of their administrative duties in connection with hospitals, venereal disease and tuberculosis, it is hoped that they will be able to concentrate on some of these unsolved problems.

Sometimes they relate almost entirely to the local community; in other cases they affect the country as a whole. There has been an increasing tendency during recent years for central government departments to use local health authorities for the collection of information and data for the purposes of national research. It is important that health departments should give full assistance in these matters.

It has been thought appropriate to include in this year's annual report a short account of some of the enquiries that are being pursued in the City of Bristol. Some of these are being undertaken on behalf of central government departments and research bodies and others are being carried out on our own initiative. So far, there are few concrete results to report for most of these enquiries are long-term.

Much of the detailed information for these surveys is gathered by health visitors, sanitary inspectors and other members of the Health Department and one cannot speak too highly of their tact and patience in making their enquiries.

(A) ENQUIRIES UNDERTAKEN ON BEHALF OF OTHER AGENCIES.

(1) Virus Diseases in Pregnancy.

It is now generally accepted that German measles in the mother during pregnancy may produce profound effects on the developing embryo. This was first made clear in Australia during the early war years when that country was affected by a widespread epidemic of German measles. Gregg found that if a woman suffered from German measles during the early months of pregnancy, various congenital defects of the eyes (a new type of cataract), of the heart, and of hearing frequently affected the infant in after-life. These observations have been confirmed in America. It would appear that cataract is likely to follow infection at six weeks, deafness at nine weeks, and a cardiac abnormality at five to ten weeks; German measles contracted at a later stage in pregnancy appears to have no deleterious effect on the unborn child. More recently, evidence has been produced which indicates that abortion or stillbirth may result from infection with this virus in the early months of pregnancy.

We do not know whether the virus of German measles has always had a tendency to produce these effects or whether it is a new phenomenon evolving from interaction of host and virus with the passage of time. It may be a phenomenon which has come to stay and even to increase in its effects; on the other hand these new features may be temporary.

Such malformations were thought, in the past, to be of genetic causation, but these new observations have opened up another large and interesting field of enquiry. If the German measles virus can produce these effects why not other virus diseases? At present, German measles not infrequently attacks young adults, but measles, mumps and chicken-pox are rare during the child bearing age. Nevertheless, observations have already begun in order to ascertain the effects of these infections on the developing foetus. It has been urged that all infectious diseases occurring in pregnant women should be statutorily notified, and such cases followed up to determine the outcome of pregnancy and the effects, if any, on the child, but there is, as yet, insufficient evidence to justify such a procedure.

Do congenital abnormalities occur in babies born of mothers who have had rubella just before conception? This is another question requiring an answer, but if the effects of the virus are exerted on the developing embryonic tissue, it would seem unlikely that such would be the case.

There is also a certain amount of evidence that poliomyelitis contracted during the early months of pregnancy might similarly produce congenital anomalies in the children.

Since 1st July, 1946, women attending the Bristol ante-natal clinics who were suffering from any virus diseases during pregnancy have been closely observed in order to ascertain whether there were any detrimental effects on the outcome of pregnancy or on the new born child. It will be appreciated that often we have to rely on the general medical practitioner for the confirmation of the diagnosis of the disease.

This information is being collected for the Ministry of Health, and it will be some years before sufficient data has been accumulated in order to draw any conclusions.

The returns from Bristol are as follows:—

<i>Infection</i>			<i>No.</i>	<i>Outcome of Pregnancy</i>
Chicken-pox	...	...	2	1 miscarriage. 1 normal delivery and normal child.
Herpes Simplex	...	...	8	Normal deliveries—Normal children.
Herpes Zoster	...	...	6	" " " "
Influenza	...	...	10	" " " "
Mumps	...	...	3	" " " "
Measles	...	...	2	" " " "
German Measles	...	...	3	" " " "

It will be noted that our findings so far are completely negative.

(2) Whooping Cough.

Although there are a number of whooping cough vaccines on the market, the Medical Research Council are by no means sure that a really satisfactory reagent has yet been prepared. Trials of various whooping cough vaccines are proceeding at the present time in various parts of the country. In order to prove that these vaccines are really effective, it is necessary to have carefully controlled trials, and half the children are being given whooping cough vaccine and half an anti-catarrhal vaccine. This raises an ethical problem for, if the vaccines really are efficacious, children from whom the vaccine is withheld are being deprived of a valuable prophylactic.

In order to obviate this ethical difficulty, the Medical Research Council are anxious to find out whether the infectivity of whooping cough within the home approximates to 95%, which is the figure given by the Americans, *i.e.*, if a case of whooping cough occurs in the home, then on the average, 95% of the susceptible children living there will, in fact, succumb. We have been asked, along with several other local authorities, to collect information to find out whether this is really so. If whooping cough proved to have this high rate of infectivity, then it will be possible to dispense with the controls in the vaccine trials, thus simplifying enormously the scientific work involved.

Briefly, the enquiry entails three visits at intervals of three weeks, to infected households in order to find out whether the originally uninfected children did, in fact, develop whooping cough. The enquiry only relates to children under ten years of age and concerns presumably susceptible children, *i.e.*, those with a previous history of whooping cough or those previously vaccinated against whooping cough must obviously be excluded. This enquiry has coincided with a period when the incidence of whooping cough in Bristol has been very low and by the end of the year only 15 cases which came within the terms of the enquiry have been completed. It is intended that this work shall continue.

(3) Maternity survey of the Population Investigation Committee.

In 1946 the Royal College of Obstetricians and Gynaecologists Population Investigation Committee and the Institute of Child Health, set up a joint committee for an enquiry into the health and development of children. The enquiry took the form of a questionnaire which was completed for all babies born during one week in March, 1946. Information was collected by health visitors, and the Bristol Local Health Authority co-operated. For the whole enquiry, information was obtained regarding a national sample of 14,000 births of which 900 were premature. Analysis of the returns provided information of great value for social medicine and public health.

Early in 1948 we were asked by this committee to co-operate in a further enquiry into the health and development of full term and premature babies and to study the relation between child bearing and maternal ill health. The aim of this second enquiry was to obtain details of the health and development of approximately 5,000 infants during the first two years of their lives. The Bristol Health Authority co-operated in this second enquiry and further questionnaires were completed by the health visitors. Interviews took place in March, 1948, and on the whole we were very successful in tracing the mothers who were kind enough to co-operate in 1946.

The final report of this further enquiry is not yet available, but a preliminary analysis has been made by the Committee. The final interpretation of this analysis will depend on the more detailed tabulations that are still being undertaken.

The provisional findings are as follows:—

1. "For each birth order two year old babies of the professional and salaried group are significantly heavier and taller than those of the manual workers. There is a suggestion that this difference increases with higher orders of birth."
2. "Babies in the professional and salaried class are on the average breast fed for a longer time than babies in the manual worker class. This difference is largely due to the fact that a high proportion of working class mothers wean their babies from the breast during the first and second months after confinement. If they successfully breast feed them till the end of the fifth month they are likely to keep them at the breast for a much longer period than are the well-to-do women."
3. "... on the average babies who have been breast fed weigh less than those who have been bottle fed. *e.g.*, A baby breast fed till the tenth month may be expected to be six ounces lighter than one who has not been breast fed at all. There is no significant relation between duration of breast feeding and stature."
4. "Only 11% of working class children slept in a room by themselves, whereas 14% slept in a room with other children, 51% with their parents, and 24% with both their parents and other children." "... children sleeping in a room by themselves seem to be less liable to get lower respiratory infections."
5. *Prematurity.*

Special study was made of the live born premature babies in the 1946 sample. "Each premature baby was matched with a mature one of the same sex, birth order, social class, born to a mother of a similar age and living in similar housing conditions. Wherever possible the matched control was a baby born in the area of the same local authority as the premature baby." The total matched sample was 404 pairs, and the findings were as follows:—

- (a) So far as the milestones of infancy were concerned, *i.e.*, age of teething, first standing, and first walking, premature babies "are only retarded by an amount which corresponds to the number of months they were premature."
"There are no sex or social class differences in the amount of retardation."
A greater proportion of premature babies were using nappies at two years than amongst the control group.
- (b) "The weight deficit at two years is of the same order as the weight deficit at birth. This weight deficit however represents a much greater retardation than is found from the milestones."
- (c) "Premature babies more often have lower respiratory infection (39%) than do the controls (27%)."
"They also get lower respiratory infections at an earlier age."
"It is the babies weighing lower than 4 lb. 8 ozs. who are particularly susceptible."
"Premature babies actually appear to be less likely than the controls to get measles and whooping cough."
"Premature babies are no more likely to get attacks of diarrhoea than are the controls."

The final report is awaited with great interest.

(4) Trial of Insecticides for Head Lice in Schoolchildren.

In March, 1948, the Health Department was asked by the Ministry of Education to co-operate in trials on the comparative value of Gamma B.H.C. (Gammexane) & D.D.T. in the control of head lice in schoolchildren.

The investigation was standardised by the Ministry and notes were drawn up for the use of cleansing personnel, simple instructions to parents, and a form for recording results.

Eleven other local authorities co-operated in these trials and the two insecticides were used in a total of nearly 1,000 cases.

According to the monthly bulletin of the Ministry of Health of June, 1949:—

"Clinical tests have demonstrated that in the new synthetic insecticides, Gamma B.H.C. and D.D.T., we have two substances having a powerful lethal action on the head louse, and both acceptable to parents and children. Neither preparation was shown to possess properties that marked it as being outstandingly superior to the other."

(B) ORIGINAL RESEARCH BY THE STAFF OF THE BRISTOL HEALTH DEPARTMENT.

Two original enquiries were started during 1948—one relating to stillbirths and neo-natal deaths and the other an enquiry into Problem Families in Bristol.

(1) Stillbirth and Neo-Natal Death Enquiry.

In the immediate pre-war years, prior to the advent of the sulphonamide drugs, we were all pre-occupied with the maternal mortality rate which, in spite of many years of serious health endeavour, had shown few signs of being reduced. With the tremendous saving of maternal lives consequent upon the use of sulpha drugs and penicillin in the treatment of puerperal sepsis, the accent has now passed to the prevention of wastage of infant lives caused by stillbirths and deaths in the first month of life. It has been estimated that this wastage amounts to 53,000 individuals every year; 20,000 of this total are stillbirths, and 18,000 are deaths under four weeks of age. One need hardly stress the importance of doing everything in our power to prevent this wastage. The increasing proportion of aged people in our population together with the decreasing proportion of able-bodied workers serve to underline the urgency of the problem. The infant mortality rate has been reduced from 150 per 1,000 births at the beginning of the century to less than 40 per 1,000 at the present time. It is a noticeable feature, however, that the lower the national infant mortality rate the greater the proportion of that rate is attributable to deaths in the first few weeks of life. In official returns, deaths during the neo-natal period form a vague and nebulous group, being ascribed to such conditions as birth injuries, prematurity, congenital debility, convulsions and malformations. The causes of death during this period are now considered to be intimately related to the health of the mother during pregnancy.

We know that the infant mortality rate is closely associated with economic factors, but whereas for the neo-natal period the rate is only 150 per cent. higher in the Registrar General's Social Class V than in Social Class I, in the period two to 12 months, the rate is 400 per cent. higher. This is not really surprising when we remember that for the two to 12 month period, infections account for the highest proportion of deaths, and that these are more easily acquired in the poorer sections of the population, where maternal ignorance, overcrowding, unemployment and poor housing conditions facilitate the spread of infection.

Prematurity accounts for the highest proportion of stillbirths and of deaths during the neo-natal period, in fact for some 50 per cent., and efforts have been made since 1944 to prevent the death of a prematurely born baby. However, the essential need is to try and prevent prematurity and the other conditions accounting for deaths in the neo-natal period. How is this being done?

Much research is being carried out at the present time in order to throw light on the causation of stillbirths and neo-natal deaths. The greatest single group of causes of prematurity is thought to be ill health of one sort or another in the mother. Much ill health in the mother can be prevented by an adequate diet during the ante-natal period. The Toronto experiment of Ebbs showed quite clearly that a group of mothers who had a good diet had better health during pregnancy, fewer complica-

tions and safer confinements, and that the incidence of miscarriages, stillbirths and premature births was much less than in a group of mothers who were fed on poor diets. Further, the Toronto experiment indicated that illnesses in infants within the first six months of life are correlated with the diet of their mothers during pregnancy, being higher in infants born of mothers who had an impoverished diet during pregnancy.

The possible influence of other social factors such as housing, overcrowding, standards of mothercraft, and so on, have been less thoroughly studied. An attempt is being made in Bristol, at the present time, to throw more light on this problem. We are familiar with the idea of investigating and making a full report on maternal deaths. In the same way we are now trying to make a survey of a sample of stillbirths and neo-natal deaths and compare these two groups with two groups of controls. Each death will be investigated from the point of view of the cause of death, (by post-mortem) the ante-natal care which was given, the conduct of labour and the social and economic circumstances of the family.

Socio-economic factors may be not only prejudicial to the healthy rearing of an infant after birth, but also to the production of a live and healthy infant. They are factors which may influence profoundly the health of the mother during the ante-natal period and which may well affect the outcome of pregnancy though to what extent is not known with any certainty.

The enquiry was started on the 1st July, 1948, and it was hoped that during the succeeding twelve months a sample of 100 stillbirths and 100 neo-natal deaths and a corresponding number of controls would be investigated. It will probably be necessary to pursue this enquiry for several years before we have accumulated sufficient data for analysis.

(2) Problem Families in Bristol.

During the past few years, problem families or as they are sometimes called, "derelict families" or "social problem families" or "unsatisfactory households," have attracted a good deal of attention. One or two surveys have been carried out by medical officers of health in order to ascertain their numbers and characteristics and reports were issued on this question from Rotherham (1944) and Luton (1946). The Eugenics Society felt that the time had come "when an authoritative sample investigation of such families should be made, if possible by an Interdepartmental Committee, with a view to assessing how many there are in the country."

In 1947 the Society set up a Problem Families Committee, of which the writer was invited to be a member, in order to conduct six pilot enquiries with the object of standardising a serviceable procedure of investigation, and thus to prepare the way for such an authoritative committee.

No one has yet given a strict definition of a "problem family," but nevertheless, they are well recognised by medical officers of health and other field workers. Their main characteristics are thought to be: (1) intractable ineducability, and (ii) instability or infirmity of character, either of the mother or father, or of both parents. "These together express themselves in the persistent neglect of children (if there are any), in fecklessness, irresponsibility, improvidence in the conduct of life, and indiscipline in the home wherein dirt, poverty and squalor are often conspicuous."

An extreme type of problem family has been described as follows:—

"Often it is a large family, some of the children being dull or feeble-minded. From their appearance they are strangers to soap and water, toothbrush and comb; the clothing is dirty and torn, and the footgear absent or totally inadequate. Often they are verminous and have scabies and impetigo. Their nutrition is surprisingly average—doubtless due to extra-familial feeding in schools. The mother is frequently substandard mentally. The home, if indeed it can be described as such, has usually the most striking characteristics. Nauseating odours assail one's nostrils on entry, and the source is usually located in some urine-sodden, faecal stained mattress in an upstairs room. There are no floor coverings, no decorations on the walls except perhaps the scribbles of the children and bizarre patterns formed by absent plaster. Furniture is of the most primitive, cooking utensils absent, facilities for sleeping hopeless—iron bedsteads furnished with soiled mattresses and no coverings. Upstairs there is flock everywhere, which the mother assures us has come out of a mattress she has unpacked for cleansing. But the flock seems to stay there for weeks and the cleansed

and repacked mattress never appears. The bathroom is obviously the least frequented room of the building. There are sometimes faecal accumulations on the floors upstairs, and tin baths containing several days accumulation of faeces and urine are not unknown. The children, especially the older ones, often seem perfectly happy and contented, despite such a shocking environment. They will give a description of how a full sized midday meal has been cooked and eaten in the house on the day of the visit when the absence of cooking utensils gives the lie to their assertions. One can only conclude that such children have never known restful sleep, that the amount of housework done by the mother is negligible, and that the general standard of hygiene is lower than that of the animal world."

It was ultimately decided to carry out pilot surveys in the following areas:—

<i>Area</i>	<i>Population</i>
Bristol	424,596
Warwickshire	425,198
Luton	110,000
Rotherham	76,070
West Riding	1,526,126
Kensington	171,510

It was considered that these areas would constitute a fairly representative cross-section of England and they had a further advantage that there were workers in these areas who were particularly interested in problem families. Briefly the enquiry has been conducted as follows:—

The organiser has enlisted the co-operation of various persons, organisations and departments who are most likely to be coming into contact with this type of family. An explanatory memorandum was sent to each of these twenty or so organisations or departments describing the objects of the enquiry, giving an outline of what was considered to be a problem family and asking them to complete forms on which information is given regarding families that have confronted them, over a period of at least six months, with chronic and relatively intractable problems for which our present social services provide no lasting remedy. These forms, after completion, were returned to the organiser, and it was hoped that the consolidated list would show the multiplicity of the problems presented by the various families.

The next stage was for the organiser to call a conference of the twenty or so persons who had sent in forms. At this conference cases would be discussed, and ultimately a shorter list of "possible problem families" would be produced, *i.e.*, some of the families would be excluded as a result of further information coming to light. The "possible problem families" would then be visited by a field worker and further information obtained.

The six enquiries are being co-ordinated by Mr. C. G. Tomlinson who, by visits to the different areas, would be in a position to obviate small differences in standards in the six areas.

Unfortunately this enquiry has coincided with a period of intense local government activity resulting from the implementation of the new national social legislation. Information has come in slowly although, on the whole, co-operation has been good, but the enquiry had not been completed by the end of the year.

The authorities concerned with social problems, whose co-operation was obtained in the pilot survey in Bristol, were as follows:—

- School Nurses
- School Medical Officers
- N.S.P.C.C.
- Health Visitors
- Sanitary Inspectors
- District Nurses and Midwives
- Public Assistance Officers
- Borough Treasurers
- Directors and Social Workers of Child Guidance and Child Psychiatric Clinics
- Housing Authorities
- Voluntary Welfare Agencies.
- Bristol Council of Social Service.

Unfortunately it was not possible to obtain the co-operation of certain other organisations which might have been in a position to give information, their objection being due to "breach of confidence."

The reports received by the end of 1948 were as follows:—

Mental Deficiency Acts Department	...	...	26
Bristol Council of Social Service	...	...	5
Social Welfare Department	...	...	20
District Nurses	...	...	1
City Treasurer's Department	...	...	27
Public Health Department	...	...	106
Sanitary Inspectors	...	...	17
N.S.P.C.C.	...	...	12
Housing Department	...	...	26
Child Guidance Clinic	...	...	14
TOTAL			254

Of the 254 forms reported:—

180	were reported by	1	agency only
24	"	"	" 2 agencies
6	"	"	" 3 "
2	"	"	" 4 "

It was immediately apparent on reading through the returns that, although certain agencies knew of the existence of these cases, they had not, in fact, returned a report. Therefore the consolidated list of names and addresses was circulated to all the co-operating agencies, and they were asked to give further information. As a result of this second circulation, the number of families reported by each agency was as follows:—

Mental Deficiency Acts Department	...	...	16
Bristol Council of Social Service	...	...	53
Social Welfare Department	...	...	28
District Nurses	...	...	—
City Treasurer's Department	...	...	—
Public Health Department	...	...	67
Sanitary Inspectors	...	...	8
N.S.P.C.C.	...	...	20
Housing Department	...	...	81
Child Guidance Clinic	...	...	20
Education Department	...	...	207

After the second circulation it was found that:—

2	families had been reported by	1	agency only
37	"	"	" 2 agencies
78	"	"	" 3 "
55	"	"	" 4 "
23	"	"	" 5 "
11	"	"	" 6 "
5	"	"	" 7 "
1	"	"	" 8 "

A preliminary sorting of this information has shown that probably 170 of the 212 families are, in fact, problem families. Three areas in the city are fairly thickly populated with problem families and two of these areas are on new housing estates. In the original 212 families, there are 401 children of school age and 25 of these have been, or are, in the Children's Homes for long stay care, but a much greater number have been in the homes for short stay care.

While the results to date are not considered to include *all* the problem families in Bristol, it is probably fair to conclude that, having regard to the total population in Bristol, the number of such families is relatively small.

This investigation will continue in 1949, when a further report will be given.

Appendix VII

METEOROLOGICAL OBSERVATIONS, 1948.

By Mr. H. H. HARDING, Meteorologist, Frampton Cotterell, Nr. Bristol.

Results from local observations at 9 a.m. G.M.T.

Mean pressure at 9 a.m. (corrected)	...	...	29.923 inches.
Departure from average (32 years)	...	...	— 0.030 inches.
Greatest pressure at 9 a.m.	...	...	30.735 ins. on April 26th.
Least pressure at 9 a.m.	...	...	28.722 ins. on January 7th.
Total rainfall at Bishopston (St. Andrew's Park)	...	...	36.11 inches.
Departure from average	...	...	+ 4.0 inches.
Number of rainy days	...	...	179.
Heaviest fall in 24 hours	...	...	1.15 ins. on May 25th.
Total rainfall at Frampton Cotterell	...	...	33.39 inches.
Departure from average	...	...	+ 1.87 inches.
Number of rainy days	...	...	200.
Departure from average	...	...	+ 17.
Days with 0.04 inches or more	...	...	139.
Days with less than 0.04 inches	...	...	61.
Heaviest fall in 24 hours	...	...	1.17 inches on May 25th.
Mean humidity at 9 a.m.	...	...	83.6%
Mean temperature (maximum and minimum)	...	...	51 degrees.
Departure from average	...	...	+ 1.6 degrees.
Maximum temperature in shade	...	...	90.9 degrees on July 28th.
Minimum temperature in screen	...	...	18 degrees on December 26th.
Extreme range	...	...	72.9 degrees.
Mean temperature of warmest day	...	...	78.3 degrees on July 29th.
Mean temperature of coldest day	...	...	26.4 degrees on December 26th.
Hours of bright sunshine	...	...	1520.5.
Departure from average	...	...	— 18.
Days of bright sunshine	...	...	122.
Days entirely overcast	...	...	67.
Days with thunder	...	...	20.
Days with fog	...	...	44.
Days with snow	...	...	6.
Number of frosty nights	...	...	37.
Number of ground frosts	...	...	114.

Appendix VIII

WELFARE SERVICES.

By Dr. R. C. Wofinden, Deputy Medical Officer of Health.

On July 5th the National Assistance Act, 1948, came into force. It is described as:—

"An Act to terminate the existing Poor Law, and to provide in lieu thereof for the assistance of persons in need by the National Assistance Board and by local authorities; to make further provision for the welfare of disabled, sick, aged, and other persons . . ."

The Bristol Corporation disbanded the Social Welfare Committee, which had dealt with Poor Law since the 1929 Act, and in its place set up a Welfare Services Committee to administer a separate Welfare Services Department under the supervision of Mr. Hector. There are many matters dealt with in this Act which are of great interest and importance from the point of view of the health of the people, and it was apparent at the outset that there would need to be the closest co-operation between the Welfare Services and Health Departments. This co-operation has been satisfactorily achieved by the Medical Officer of Health, acting as the medical adviser to the Welfare Services Committee.

As a result of this Act, many important changes had been initiated by the end of the year. Discussions were held between the Regional Hospital Board and the local authority, as a result of which, it was agreed that Stapleton Institution would be transferred to the Regional Hospital Board for hospital purposes. Eastville Institution, which has always catered for both the sick and the able-bodied, now became, as a result of the National Health Service Act, of interest to both the Regional Hospital Board and the local authority. It was agreed, as the local authority were the major users of the premises, that they would remain responsible for the administration of the building, and would continue to look after the sick cases on behalf of the Board until such time as the Board could transfer them to a hospital for the chronic sick. Snowdon Road Hospital, which was completed just before the outbreak of war, and which was intended for the use of able-bodied aged persons has, ever since its opening, been used for nursing the chronic sick. However, the Board have agreed that Snowdon Road Hospital will remain the property of the local authority but have asked for a ten year lease for its use as a hospital.

These changes have restricted the accommodation for the able-bodied, and the Welfare Services Committee are making plans to provide additional accommodation, but future accommodation, in accordance with the Act, will be in much smaller units than these three institutions.

The National Health Service Act has made available a family doctor for every man, woman and child in the country and the able-bodied residents at Eastville were given the opportunity, if they wished, of free choice of doctor. However, for administrative convenience, arrangements were made for three general practitioners, namely, Dr. Roberts, Dr. Mundy, and Dr. Bowles, to offer their services to the residents, and the vast majority of them agreed to come on one or other of these doctors' lists. These three doctors are therefore giving general practitioner services to the residents; in addition, they are carrying out a routine medical examination of each resident twice a year, and are looking after the sick cases on behalf of the Regional Hospital Board. The ophthalmic, physiotherapy and chiropody arrangements at the institution are being upgraded as far as possible by the allocation of an additional room, an increase in the number of sessions, and the provision of better equipment. By the end of the year it had not been possible for the Regional Hospital Board to appoint a geriatrician to the city, but it is hoped that, when such a specialist has been appointed, he will be available to give advice not only in the case of the sick persons, but also in the case of the aged, able-bodied. There is no hard and fast dividing line in old age between sickness and health, and it will always be necessary for the hospital authorities to work in close association with the welfare services and the health departments.

The ancient office of district medical officer (usually referred to in the past as the "Poor Law doctor") was finally terminated by the National Health Service Act. All previous Poor Law patients now have the opportunity of registering with their own private doctor. This type of case, including as it does many of the aged people, is certainly not remunerative from the general practitioner's point of view, but it is pleasing to record that no difficulties have arisen with regard to the general practitioners refusing to accept these cases on their lists.

As a result of the Act, relieving officers will be no longer necessary. Their place has been taken by welfare officers. The work that they previously carried out under the Lunacy Acts has now been taken over by another class of officer known as "duly authorised officers" employed in the mental health section of the health department. Their work is referred to in the Appendix on the mental health services, page 52.

Apart from the provision of various types of residential accommodation for different categories of persons, the Welfare Services Committee have very important duties under section 29 of the Act. This section deals with the welfare arrangements for the blind, deaf, dumb, and crippled persons, etc., and it is under these provisions that health departments have a very important interest. So far, the Minister of Health has made it obligatory to provide welfare arrangements for the blind only, and by the end of the year no definite plans had been formulated by the authority for other types of handicapped persons, although a survey of all handicapped persons in the city was begun. Arrangements were made for blind welfare to be carried out on behalf of the authority by the Bristol Royal Blind Asylum.

The health department employ a health visitor for the prevention of blindness. Her duties are primarily concerned with ensuring that cases of progressive eye disease obtain the necessary supervision and/or treatment. She spends approximately four sessions a week on this work in close association with the Almoner at the Bristol Eye Hospital, with the Royal Blind Asylum, and the Home Teachers for the Blind. In addition, she attends the specialists eye sessions at the central health clinic, where all blind certification is carried out. Sister Wallis reports on her work as follows:—

"During the last three months, five clinic sessions have been held by Mr. Garden, at the central health clinic.

Eight persons were put on the blind register, out of the fourteen new cases who attended. There were three re-exams, two being retained on the register, the third one not being registerable. Two bedridden patients were referred for domiciliary visits for registration.

There have been ten new cases added to the welfare officer's register, and one removed, the patient having died.

Nineteen 'first visits' have been paid, all cases having been referred by the Almoner of the Bristol Eye Hospital. These cases are not necessarily added to the welfare officer's register, this is done only when follow-up visits are required.

Follow-up visits are very varied, and often entail making contact with different departments of the social welfare services. Thirty-six such visits have been paid and eleven useless visits."

The increasing proportion of old people in the population, together with the limited number of hospital beds, and the scarcity of domestic labour, and nurses, is adding greatly to the difficulties of the welfare services and health departments. The health department, by providing a health visitor, home nursing and home help service, is doing much to relieve pressure on hospital accommodation by maintaining patients in their homes. In particular, Miss Edman, a qualified health visitor, spends most of her time visiting old people, many of whom are suffering from chronic disease. She works in close association with the welfare officers of the welfare services department and the Bristol Council of Social Service. Her duties include such things as making arrangements for, home nursing, the supply of a home help, distribution of food parcels, and the maintenance of a register for cases which will be needing admission to hospital in the near future. The old people appreciate her services, as she not only tries to help them with their material needs, but also helps them to maintain contact with the outside world, and works very much in the capacity of a friendly visitor.

From the point of view of tidy administration, it is perhaps unfortunate that section 29 of the National Assistance Act is not administered by the local health authority, but there is no doubt, that by close co-operation between the welfare services and health departments of the local authority, the hospital authorities and the various local departments of ministries, much will be done in future years to promote the welfare of these persons who are substantially and permanently handicapped, and whose welfare in the past has often been sadly neglected.

Appendix IX

A.—VITAL STATISTICS.

Table 1.—Supplied by the Registrar General.

**Population, marriages, births, deaths, natural increase, infant mortality, for
Calendar Year 1948 and previous seven years.—Bristol.**

	1948	1947	1946	1945	1944	1943	1942	1941
Estimated civilian population (mid year)	435,000	428,600	417,090	414,320	405,530	370,800	362,200	360,150
Marriages.								
Number	3,786	4,033	3,818	3,919	3,071	3,123	4,131	4,125
Rate per 1,000 population ...	17.41	18.82	18.31	18.92	15.15	16.8	22.8	22.9
Births.								
Legitimate—males	3,730	4,430	3,913	3,352	3,726	3,369	3,164	2,614
females	3,672	4,239	3,621	3,078	3,492	3,082	2,956	2,516
Illegitimate—males	225	241	255	301	290	214	158	113
females	204	232	252	296	259	220	144	136
Total	7,831	9,142	8,041	7,027	7,767	6,885	6,422	5,379
Rate per 1,000 population ...	18.00	21.33	19.28	16.96	19.15	18.57	17.73	14.94
Stillbirths.								
Legitimate—males	75	100	117	78	115	101	123	88
females	89	94	86	81	85	97	96	82
Illegitimate—males	4	11	8	9	15	5	8	5
females	7	4	6	9	3	6	3	8
Total	175	209	217	177	218	209	230	183
Rate per 1,000 total births ...	22	22	26	25	27	29	34	33
Deaths.								
Males	2,308	2,563	2,424	2,387	2,308	2,327	2,203	2,841
Females	2,268	2,551	2,473	2,418	2,149	2,271	2,162	2,772
Total	4,576	5,114	4,897	4,805	4,457	4,598	4,365	5,613
Rate per 1,000 population ...	10.52	11.93	11.75	11.60	10.99	12.40	12.05	15.59
Natural increase per 1,000 popu- lation	7.48	9.39	7.54	5.36	8.16	6.17	5.68	decrease .65
Deaths under 1 year.								
Legitimate	178	255	273	208	244	290	221	253
Rate per 1,000 legit. live births	24	29	36	32	34	45	36	49
Illegitimate	14	12	26	37	24	23	14	37
Rate per 1,000 live births ...	33	25	51	62	44	53	46	149
Total deaths	192	267	299	245	268	313	235	290
Rate per 1,000 births	25	29	37	35	35	45	37	54
Deaths under 1 month.								
Total deaths	119	160	192	140	143	191	167	138
Rate per 1,000 live births ...	15	18	24	20	18	28	24	27
Diarrhoea and enteritis— (under two years)								
Deaths	3	16	25	22	33	31	8	25
Rate per 1,000 live births ...	0.38	1.7	3.1	3.1	4.2	4.5	1.25	4.7
Maternal mortality.								
Deaths from puerperal sepsis...	3	2	2	3	3	2	2	2
Rate per 1,000 total births ...	0.37	0.21	0.24	0.42	0.37	0.28	0.30	0.37
Deaths from other puerperal causes	3	9	16	6	7	8	11	5
Rate per 1,000 total births ...	0.37	0.96	1.94	0.83	.88	1.13	1.80	0.92
Total deaths from puerperal causes	6	11	18	9	10	10	13	7
Rate per 1,000 total births ...	0.74	1.17	2.18	1.25	1.25	1.41	2.10	1.29

Table 2.—Supplied by the Registrar General.

Birth-rates, death-rates, infant mortality, maternal mortality and case-rates for certain infectious diseases in the year 1948.

(Provisional figures based on Quarterly Returns).

	Bristol	England and Wales	126 County Boroughs and great towns including London	148 Smaller towns (resident populations 25,000 to 50,000 at 1931 Census)	London Administrative County
*Rates per 1,000 civilian population.					
BIRTHS :					
Live	18.00	17.9 (A)	20.0	19.2	20.1
Still	0.40	0.42 (A)	0.52	0.43	0.39
DEATHS :					
All causes	10.52	10.8 (A)	11.6	10.7	11.6
Typhoid and paratyphoid fevers ...	0.00	0.00	0.00	0.00	0.00
Whooping cough ...	0.02	0.02	0.02	0.02	0.01
Diphtheria	—	0.00	0.00	0.00	0.01
Tuberculosis	0.55	0.51	0.59	0.46	0.63
Influenza	0.02	0.03	0.03	0.04	0.02
Smallpox	—	—	—	—	—
Acute poliomyelitis and polioencephalitis	0.00	0.01	0.01	0.01	0.00
Pneumonia	0.45	0.41	0.38	0.36	0.54
Measles	0.00	—	—	—	—
Scarlet fever	—	—	—	—	—
NOTIFICATIONS :					
Typhoid fever	0.00	0.01	0.00	0.01	0.00
Paratyphoid fever ...	0.00	0.01	0.01	0.01	0.01
Cerebro-spinal fever ...	0.03	0.03	0.03	0.02	0.03
Scarlet fever	1.26	1.73	1.90	1.82	1.37
Whooping cough ...	4.23	3.42	3.51	3.31	3.13
Diphtheria	0.04	0.08	0.10	0.09	0.10
Erysipelas	0.33	0.21	0.23	0.21	0.22
Smallpox	—	—	—	—	—
Measles	10.38	9.34	9.75	8.84	9.17
Pneumonia	1.05	0.73	0.84	0.60	0.57
Acute poliomyelitis ...	0.066	0.04	0.05	0.04	0.04
Acute polioencephalitis	—	0.00	0.00	0.00	0.00
Rates per 1,000 live births.					
Deaths under 1 year of age	25	34 (B)	39	32	31
Deaths from diarrhoea and enteritis under 2 years of age	0.38	3.3	4.5	2.1	2.4
MATERNAL MORTALITY :					
Puerperal sepsis	0.38	—	—	—	—
Other maternal causes	0.38	—	—	—	—
Total	0.76	—	—	—	—
Rate per 1,000 total births (i.e., live and still).					
MATERNAL MORTALITY :					
Puerperal sepsis	0.37	0.24	—	—	—
Other maternal causes	0.37	0.78	—	—	—
Total	0.74	1.02	—	—	—
NOTIFICATIONS :					
Puerperal fever	—	—	—	—	—
Puerperal pyrexia	13.86	6.89	8.90	4.71	7.34 (C)

Abortion :—Mortality per million women aged 15-45 in England and Wales
with sepsis ... 9
without sepsis ... 4

* A dash (—) signifies that there were no deaths.

(A) = Rates per 1,000 TOTAL population.

(B) = Per 1,000 related births.

(C) = In London puerperal fever alone was 0.61.

Table 3.

*Compiled from figures supplied by Registrar General.***Total deaths by cause and age during the calendar year 1948—Bristol.**

CAUSES OF DEATH	Sex	All Ages	0—1	1—5	5—15	15—45	45—65	65+
ALL CAUSES	M.	2,308	105	24	17	190	649	1,323
	F.	2,268	87	21	13	168	488	1,491
1. Typhoid & paratyphoid fevers	M.	1	—	1	—	—	—	—
	F.	—	—	—	—	—	—	—
2. Cerebro-spinal fever ...	M.	—	—	—	—	—	—	—
	F.	—	—	—	—	—	—	—
3. Scarlet fever	M.	—	—	—	—	—	—	—
	F.	—	—	—	—	—	—	—
4. Whooping cough	M.	3	3	—	—	—	—	—
	F.	5	3	2	—	—	—	—
5. Diphtheria	M.	—	—	—	—	—	—	—
	F.	—	—	—	—	—	—	—
6. Tuberculosis of respiratory system	M.	136	—	1	—	55	61	19
	F.	72	—	—	1	52	13	6
7. Other forms of Tuberculosis	M.	17	1	5	2	8	1	—
	F.	13	2	3	1	4	1	2
8. Syphilitic disease	M.	17	—	—	—	1	8	8
	F.	5	—	—	—	—	3	2
9. Influenza	M.	5	—	—	—	2	2	1
	F.	4	—	—	—	—	1	3
10. Measles	M.	1	—	—	1	—	—	—
	F.	—	—	—	—	—	—	—
11. Acute poliomyelitis & polio-encephalitis	M.	1	—	—	—	1	—	—
	F.	—	—	—	—	—	—	—
12. Acute infectious encephalitis	M.	3	—	—	—	1	2	—
	F.	6	—	—	—	—	4	2
13. Cancer of buccal cavity and œsophagus	M.	24	—	—	—	—	8	16
	F.	36	—	—	—	1	21	14
13. Cancer of uterus	M.	88	—	—	—	1	33	54
14. Cancer of stomach and duodenum	F.	68	—	—	—	4	28	36
15. Cancer of breast	M.	—	—	—	—	—	—	—
	F.	68	—	—	—	6	28	34
16. Cancer of all other sites ...	M.	252	—	—	—	15	98	139
	F.	238	—	—	—	23	85	130
17. Diabetes	M.	7	—	—	—	—	—	7
	F.	29	—	—	—	2	3	24
18. Intra-cranial vascular lesions	M.	215	—	—	—	3	51	161
	F.	330	—	—	—	1	53	276
19. Heart disease	M.	744	—	—	—	14	169	561
	F.	723	—	1	—	16	103	603
20. Other diseases of circulatory system	M.	69	—	—	—	2	17	50
	F.	79	—	—	—	5	17	57
21. Bronchitis	M.	127	4	1	1	4	42	75
	F.	81	1	1	—	—	10	69
22. Pneumonia	M.	100	28	6	—	6	23	37
	F.	94	14	4	1	4	14	57
23. Other respiratory diseases ...	M.	35	1	—	—	2	27	5
	F.	34	—	1	1	5	13	14
24. Ulceration of stomach and duodenum	M.	36	—	—	—	8	15	13
	F.	10	—	—	—	1	5	4
25. Diarrhœa (under 2 years of age)	M.	3	2	1	—	—	—	—
	F.	—	—	—	—	—	—	—
26. Appendicitis	M.	11	—	—	1	4	1	5
	F.	5	—	—	—	2	—	3
27. Other digestive diseases ...	M.	40	2	—	1	7	9	21
	F.	53	—	1	2	3	15	32
28. Nephritis	M.	51	—	—	—	3	17	31
	F.	48	—	—	—	8	18	22
29. Puerperal and post-abortive sepsis	F.	3	—	—	—	3	—	—
30. Other maternal causes ...	F.	3	—	—	—	3	—	—
31. Premature birth	M.	17	17	—	—	—	—	—
	F.	16	16	—	—	—	—	—
32. Congenital malformations, birth injury, infantile disease	M.	54	42	3	3	2	3	1
	F.	53	46	1	1	4	1	—
33. Suicide	M.	25	—	—	—	12	6	7
	F.	17	—	—	—	4	8	5
34. Road traffic accidents ...	M.	27	—	2	4	8	6	7
	F.	7	—	3	2	1	1	—
35. Other violent causes ...	M.	50	2	2	2	14	16	14
	F.	31	—	1	1	2	6	21
36. All other causes	M.	149	3	2	2	17	34	91
	F.	137	5	3	3	14	37	75

Table 4.

*Compiled from figures supplied by Registrar General.***Principal causes of death during calendar year 1948—Bristol.**

Death Rate per 1,000	DISEASE	Net deaths in 1948	% to total deaths
.002	Typhoid and paratyphoid fevers	1	.02
—	Cerebro-spinal fever	—	—
—	Scarlet fever	—	—
.018	Whooping cough	8	.17
—	Diphtheria	—	—
.478	Tuberculosis of respiratory system	208	4.54
.069	Other forms of tuberculosis	30	.66
.051	Syphilitic disease	22	.48
.021	Influenza	9	.20
.002	Measles	1	.02
.002	Acute poliomyelitis and polio-encephalitis	1	.02
.021	Acute infectious encephalitis	9	.20
.055	Cancer of buccal cavity and oesophagus	24	.52
.083	Cancer of uterus	36	.79
.359	Cancer of stomach and duodenum	156	3.41
.156	Cancer of breast	68	1.49
1.127	Cancer of all other sites	490	10.71
.083	Diabetes	36	.79
1.253	Intra cranial vascular lesions	545	11.91
3.374	Heart disease	1,467	32.06
.340	Other diseases of circulatory system	148	3.23
.478	Bronchitis	208	4.54
.446	Pneumonia	194	4.24
.159	Other respiratory diseases	69	1.51
.106	Ulceration of stomach and duodenum	46	1.00
.007	Diarrhoea	3	.07
.037	Appendicitis	16	.35
.214	Other digestive diseases	93	2.03
.228	Nephritis	99	2.16
.007	Puerperal and post-abortive sepsis	3	.07
.007	Other maternal causes	3	.07
.076	Premature birth	33	.72
.246	Congenital malformations, birth injury, in- fantile disease	107	2.34
.097	Suicide	42	.92
.078	Road traffic accidents	34	.74
.186	Other violent causes	81	1.77
.658	All other causes	286	6.25
10.52	ALL CAUSES	4,576	

Table 5.
POPULATION, BIRTH-RATES, DEATH-RATES, MATERNAL MORTALITY, ETC., IN 16 LARGE TOWNS
for the year 1948

Name of Town	Population as esti- mated by Registrar- General Mid. 1948	Per 1,000 Population		Death Rates per 1,000 population from :—										Diar- rhea under 2 years. Per 1,000 Live Births			Infantile Mortality Rate	Maternal Mortality per 1,000 total births.		
		Birth Rate	Death Rate	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Typhoid & Paratyphoid	Influenza	Cancer	Tuberculosis		From Sepsis	From Other Causes	Total					
											Pulmon- ary	Other Forms								
BIRMINGHAM	1,096,100	19.5	9.8	0.01	0.00	0.03	0.00	—	0.03	1.82	0.59	0.04	3.2	32	—	0.69	0.69			
BRADFORD	288,500	18.8	13.4	0.00	0.00	0.01	0.00	0.00	0.02	2.24	0.42	0.06	5.1	43	0.00	0.89	0.89			
BRISTOL	435,000	18.0	10.5	0.00	—	0.02	—	0.00	0.02	1.78	0.48	0.07	0.38	25	0.37	0.37	0.74			
CARDIFF	240,600	20.26	11.08	0.01	—	0.02	—	0.00	0.02	1.92	0.68	0.06	4.3	36	0.20	0.60	0.80			
COVENTRY	250,400	20.3	8.8	0.01	—	0.02	—	0.00	0.01	1.40	0.5	0.1	3.1	46	0.39	0.78	1.17			
LEEDS	501,900	18.4	11.8	0.01	—	0.01	0.00	—	0.04	1.91	0.49	0.06	6.61	35	—	0.21	0.21			
LEICESTER	280,300	19.1	10.8	—	—	0.00	0.00	—	0.01	1.88	0.57	0.08	3.55	38	—	1.09	1.09			
LIVERPOOL	791,800	22.3	11.4	0.01	—	0.04	0.01	0.00	0.02	1.80	0.79	0.10	10.2	54	0.17	0.60	0.77			
MANCHESTER	693,000	19.9	12.27	0.02	—	0.03	0.00	0.00	0.02	2.00	0.69	0.07	4.20	42	0.07	0.71	0.78			
NEWCASTLE	293,600	19.43	11.8	0.01	—	0.01	—	0.00	0.01	2.01	0.77	0.09	5.43	38	—	0.85	0.85			
NOTTINGHAM	296,900	20.3	10.9	0.00	—	0.00	0.00	—	0.00	1.71	0.67	0.11	5.94	44	0.16	0.33	0.49			
PORTSMOUTH	216,200	21.06	11.0	0.00	—	0.01	—	0.00	0.02	1.82	0.54	0.06	1.98	23	0.21	1.29	1.50			
PLYMOUTH	188,940	21.36	12.25	—	—	0.01	0.00	0.00	0.02	2.09	0.73	0.12	2.72	30	0.24	0.49	0.73			
SHEFFIELD	514,400	17.7	11.3	0.01	—	0.05	0.00	0.00	0.01	1.98	0.44	0.05	4.72	32	0.11	0.53	0.64			
STOKE-ON-TRENT	273,600	20.0	10.7	0.02	0.00	0.04	0.00	0.00	0.03	1.84	0.55	0.06	6.96	42	0.18	0.35	0.53			
SUNDERLAND	180,600	21.4	12.4	0.01	—	0.03	—	—	0.04	2.02	0.39	0.14	9.30	55	0.25	0.76	1.01			

Table 6.
Notifiable Cases during 1948 (including Port cases). Local Figures.

NOTIFIABLE DISEASES.	NOTIFICATIONS.							REMOVED TO HOSPITAL		Notified in each quarter.				Attack rate per 1,000 Population	DEATHS (Corrected for transfers.)																
	At all ages	At ages—years :						No.	%	1st	2nd	3rd	4th		At ages—years :																
		Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65								65 and upwards	All ages	Under 1	1 to 2	2 to 5	5 to 15	15 to 25	25 to 45	45 to 65	65 and upwards							
Diphtheria ...	18	3	13	—	2	—	—	18	100	9	6	1	2	.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Erysipelas ...	144	1	2	2	33	75	31	70	49	34	42	34	34	.33	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Scarlet fever ...	547	2	144	344	35	20	2	423	77	111	137	140	159	1.26	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Enteric fever ...	1	—	—	—	—	—	—	1	100	—	—	1	—	.002	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—		
Para-typhoid ...	1	—	1	—	—	—	—	1	100	—	—	—	1	.002	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Cerebro-spinal meningitis	12	3	3	—	3	1	—	11	92	6	3	1	2	.027	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Poliomyelitis ...	29	1	12	11	—	4	1	25	86	2	2	15	10	.066	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Pneumonia ...	457	57	104	51	24	75	85	159	35	159	75	71	152	1.05	194	44	7	1	1	2	8	37	—	—	—	—	—	—	—	94	
Malaria ...	13	—	—	—	4	8	1	10	77	3	4	5	1	.029	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Dysentery ...	19	2	4	4	1	4	3	10	53	7	3	6	3	.043	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Encephalitis lethargica ...	1	—	—	—	—	—	1	—	—	1	—	—	—	.002	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	
Polio-encephalitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Puerperal pyrexia ...	111	—	—	—	47	64	—	18	16	33	35	24	19	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Ophthalmia neonatorum	16	16	—	—	—	—	—	—	—	8	3	2	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles ...	5,513	202	3,129	2,111	45	24	1	120	2	72	361	1,355	3,725	10.38	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Whooping cough ...	1,838	237	1,132	434	8	20	5	205	11	679	637	390	132	4.23	8	6	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Acute rheumatism ...	68	—	63	5	—	—	—	—	—	27	17	12	12	.156	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Table 7.
Tuberculosis (including Port cases). Local Figures.

CASES.														DEATHS. (Corrected for transfers.)											
	At all ages	Under 1	1-5	10-15	20-25	35-45	55-65+	Quarters				Case rate per 1,000 Popu'ln	At all ages	Under 1	1-5	10-15	20-25	35-45	55-65+	Death rate					
								1st	2nd	3rd	4th														
Pulmonary tuberculosis Cases notified	478	—	19	29	74	77	82	60	59	38	17	93	143	132	110										
Other cases*	62	—	—	—	1	17	11	16	8	3	6	15	19	10	18										
Non-pulmonary tuberculosis† Cases notified	76	—	11	14	4	9	6	13	6	4	3	29	12	16	19										
Other cases*	19	3	3	2	—	4	2	—	2	2	1	4	4	9	2										
Total 1948	635	3	33	45	86	100	110	84	73	47	27	141	178	167	149										
Total 1947	618	7	30	27	92	111	123	76	65	40	20	160	167	137	154										
1946	692	4	28	40	104	105	140	92	71	52	27	163	204	161	164										
1945	632	4	29	41	85	96	136	75	55	58	25	173	168	138	153										
1944	648	3	19	27	97	103	119	108	71	42	24	165	177	167	139										
1943	717	10	16	29	90	122	161	96	87	53	22	202	169	160	186										
1942	587	4	12	10	30	29	59	113	103	78	55	153	152	128	154										
1941	588	7	33	30	21	89	113	91	71	37	16	144	167	121	156										
1940	564	5	40	44	20	81	65	113	85	35	19	157	179	120	108										
1939	567	4	33	43	68	75	105	77	66	43	20	154	155	134	124										

* Cases coming to the knowledge of the M.O.H. otherwise than by notification.

† Includes 11 cases Lupus Vulgaris not previously notified between 1923-1948.

Table 8.

1948

INFANT MORTALITY.

(Corrected for transfers) Local Figures.

Total 1947	CAUSE OF DEATH	Under one day	Under one week	Weeks				Total under one month	Months											Total 1948	Deaths in Quarters																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
				1-2 2-3 3-4					1	2	3	4	5	6	7	8	9	10	11																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
1	Chicken pox	

Premature Births—1948. (Bristol Residents). Local figures.

Birth weight	At Home				In Nursing Homes				In Southmead and Mortimer House				Total			
	Cases	Deaths	Alive at 1 month	Mortality %	Cases	Deaths	Alive at 1 month	Mortality %	Cases	Deaths	Alive at 1 month	Mortality %	Cases	Deaths	Alive at 1 month	Mortality %
Under 2 lbs. ...	4	4	—	100.0	1	1	—	100.0	2	2	—	100.0	7	7	—	100.0
2—2½ „ ...	2	2	—	100.0	—	—	—	—	8	6	2	75.0	10	8	2	80.0
2½—3 „ ...	3	1	2	33.3	4	1	3	25.0	13	6	7	46.1	20	8	12	40.0
3—3½ „ ...	1	—	1	0.0	3	2	1	66.6	10	1	9	10.0	14	3	11	21.4
3½—4 „ ...	6	2	4	33.3	5	—	5	0.0	18	1	17	5.5	29	3	26	10.3
4—5 „ ...	43	2	41	4.6	36	7	29	19.4	87	5	82	5.7	166	14	152	8.4
Over 5 „ ...	52	—	52	0.0	60	—	60	0.0	113	4	109	3.5	225	4	221	1.8
Not weighed ...	5	2	3	40.0	16	3	13	18.7	72	21	51	29.1	93	26	67	27.9
TOTAL	116	13	103	11.2	125	14	111	11.2	323	46	277	14.2	564	73	491	12.9

Table 9.
MATERNAL MORTALITY. Uncorrected Local Figures.

Cause of Death	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1948 — AGE GROUPS					
											15—	20—	25—	30—	35—	40+
Cesarian Section ...	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—
Toxæmia of Pregnancy ...	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—
Puerperal Sepsis ...	—	4	1	3	1	4	1	1	3	1	—	—	—	—	—	—
Septic Abortion ...	2	1	—	—	1	—	4	2	1	1	—	—	—	—	—	—
Abortion (non-septic) ...	—	—	—	—	1	—	1	—	—	1	—	—	—	—	—	—
Ruptured Ectopic Gestation ...	—	1	1	—	—	1	—	—	—	—	—	—	—	—	—	—
Hydatidiform mole ...	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—
Puerperal Toxæmia ...	4	4	1	—	—	3	2	—	—	—	—	—	—	—	—	—
Eclampsia ...	5	3	1	1	5	1	1	4	5	1	—	—	—	—	—	—
Dystocia ...	1	—	—	—	1	1	1	—	—	—	—	—	—	—	—	—
Retained Placenta ...	—	—	—	—	—	2	1	1	—	—	—	—	—	—	—	—
Placenta Prævia ...	—	2	—	1	2	1	—	1	—	1	—	—	—	—	—	1
Post-Partum hemorrhage ...	6	1	—	2	1	1	2	1	—	1	—	—	—	—	—	—
Embolism ...	—	2	1	1	4	1	1	3	2	1	—	—	—	—	—	1
Ruptured uterus ...	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—
Obstetric shock ...	—	4	1	1	2	—	1	2	1	1	—	—	—	—	—	—
Acute yellow atrophy ...	—	—	—	2	2	—	1	1	1	—	—	—	—	—	—	—
Chorea ...	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—
Intestinal obstruction ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Uremia ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pulmonary Oedema ...	1	—	—	—	—	—	1	1	—	1	—	—	—	—	—	1
Total ...	23	23	5	13	20	15	17	18	16	10	—	3	1	3	—	3
Rate per 1,000 total births ...	2.93	2.83	1.33	1.95	2.65	1.74	2.09	1.96	1.55	1.15						
Deaths in institutions ...	17	18	5	12	19	13	17	16	16	9						
Age Groups—																
15—20	—	1	—	—	1	—	—	—	—	—						
20—25	4	4	—	4	4	4	2	2	5	3						
25—30	4	10	2	4	3	3	1	6	3	1						
30—35	9	4	2	1	7	6	8	3	4	3						
35—40	4	4	1	3	3	1	4	4	1	—						
40+	2	—	—	1	2	1	2	3	3	3						

B.—DEPARTMENT OF PREVENTIVE MEDICINE.

Table 1—Pathological and Bacteriological Examinations.

1947		1948
	<i>Swabs.</i>	
	<i>Ear, Throat and Nose.</i>	
6,735	Diphtheria Culture	5,855
30	" Virulence	21
3,510	Hæmolytic streptococci	3,527
—	Typing	2
1,827	Other organisms	3,777
—	Films for Vincents'	386
—	Penicillin sensitivity	25
—	Bile solubility	3
—	Fungi	2
	<i>Other Sources.</i>	270
53	Laryngeal for T.B.	21
—	Post mortem	6
	<i>Sputa.</i>	
49	Malignant cells	69
6,304	Tuberculosis	9,093
74	Pneumococcal typing	40
—	Other organisms for fungi	1
1,458	do. Aerobic and anaerobic	2,303
—	do. Streptomycin sensitivity	2
—	do. G.P. inoculation	6
—	do. Bile solubility	8
—	do. Penicillin sensitivity	486
	<i>Blood.</i>	
544	Special hæmatology investigations	895
4,826	Blood counts	7,904
1,961	Differential counts	2,798
3,961	Hæmoglobin counts	5,722
265	Reticulocyte counts	274
41	Platelet counts	142
1,107	Sedimentation rate	943
224	Bleeding time	664
92	Coagulation time	101
132	Bilirubin investigations	141
97	Sugar tolerance	49
1	Sulphonilamides	3
—	Penicillin	4
1,287	Urea	1,333
215	Sugar	322
101	Agglutination	106
10	Uric acid	6
30	Films for malaria	95
28	Paul Bunnell	27
28	Grouping	4
446	Proteins	970
11	Fragility	4
16	Chlorides	19
—	Ascorbic acid	3
272	Phosphatase	232
19	Calcium	29
189	Cholesterol	134
—	" esters	13
146	Blood culture organisms	128
77	Thymol turbidity	65
1	Sodium	7
4	Potassium	7
—	Prothrombin index	720
	<i>Stomach Contents.</i>	
2,849	Test meals	2,395
12	Washings for tubercle	45
6	Vomits	10
	<i>Fæces.</i>	
501	Enteric	335
274	Food poisoning	520
1,900	Dysentery	1,099
46	Tuberculosis	61
474	Other organisms	—
95	Amoebic dysentery	40
353	Occult blood	534
40	Fat	42
12	Bile Pigments	4
34	Parasites	171
—	Biochemical investigations	76

Pathological and Bacteriological Examinations—*continued.*

1947		1948
	<i>Urine.</i>	371
4,184	Routine	3,551
3,188	Culture	3,088
13	Enteric	9
237	Friedman	647
—	Quantitative	16
124	Urea concentration	42
128	T.B.	199
15	Inoculation for T.B.	24
—	Amoebic dysentery	—
1	Ascorbic acid	—
1	Hippuric acid	—
80	Chlorides	230
—	Water clearance	—
49	Acetone	290
228	Sugar	432
121	Urobilin	118
226	Bile pigments	121
—	Bile salts	88
—	Calcium	—
1	Sulphonamides	9
—	Penicillin	50
8	Diastase	10
6	Occult blood	11
—	Urea	121
—	Albumen others	313
—	Biochemical investigations	130
59	<i>Pus.</i>	
578	Penicillin	116
—	Organisms (aerobic)	881
—	Organisms (anaerobic)	881
—	T.B. "	295
—	G.P. inoculation	8
2,149	<i>Fluids</i> (for cells, biochemistry and organisms).	
267	Cerebro spinal fluids	5,689
138	Pleural fluids	1,890
177	Seminal fluids	425
16	Other fluids	131
—	Penicillin (C.S.Fs.)	19
—	" (Pleural fluids)	10
25	Pleural fluids for guinea pig inoc.	49
462	<i>Histology.</i>	
17	Human tissues	541
287	Animal tissues	34
249	<i>Post Mortems</i>	413
1	<i>Waters.</i>	
1,310	Bacterial counts	327
—	Organisms	—
—	<i>Rats.</i>	
—	Plague	1,041
211	<i>Milks.</i>	
201	Accredited	182
282	Tuberculin Tested	147
129	(Schools)	192
159	Pasteurised Plants	132
208	Others	226
771	Heat Treated	294
208	Phosphatase	1,167
1,116	Cream line	425
—	Tuberculosis	1,405
1	Dysentery	—
31	Enteric	—
—	Other organisms	—
197	Ice Cream with methylene blue	426
—	" " without " "	17
47	" " powder	3
257	Churn rinses	21
—	Milk bottle rinses	163
10,087	<i>Venereal Disease.</i>	
8,626	Blood for Wassermann reaction	9,163
233	Blood for Kahn	7,585
—	Complement fixation tests for gonorrhoea	117
1,325	Blood for quantitative Wassermann reaction	1,348
278	C.S. Fluid for Wassermann reaction	496
190	C.S. Fluid for cells	327
278	C.S. Fluid for chemical	484
237	C.S. Fluid for Lange	436

Pathological and Bacteriological Examinations—continued.

1947		1948
9,809	Films for gonococci	8,273
—	Blood for P.P.R.	1,145
1	Urine for gonococci	13
6,963	Cultures for gonococci	6,531
1	Fluid for spirochaetes	—
3	<i>Preparations.</i>	
8	Tuberculin	1
—	Measles serum (batches)	10
5	Lactic acid culture	4
	Vaccine (Gonococcal)	—
	(Others)	10
85	<i>Foodstuffs.</i>	
27	Sterility	43
1	Organisms	101
6	Histology	56
	<i>Whooping Cough Plates</i>	4
	<i>Miscellaneous.</i>	
	Restaurant specimens	220
	Pieces of muscle for dissection	9
	Skin scrapings	10
	Hair for tinea from humans	46
95	" " cats	2
	Identification of animal parasites	2
	Dextrose saline	1
	Normal saline	1

C.—CLINICS.

Table 1—Maternity and Child Welfare.

1947		1948
	(a) <i>Notifications—</i>	
9,972	Live Births (including 564 premature births) ...	8,485
256	Still Births ...	211
49	Confinements at Home—by Doctor ...	45
3,229	by Midwife ...	2,363
23	Premature Births admitted to Hospital (included above) ...	15
6,873	Confinements at Institutions ...	6,190
	(b) <i>Forms of Maternity Assistance Granted—</i>	
3,337	Midwives' Fees ...	667
2	Consulting Obstetricians ...	—
203	Dentures ...	87
14	Spectacles ...	6
729	(c) <i>Fees claimed by Medical Practitioners</i> ...	354
	(d) (i) <i>Municipal Midwives—</i>	
2,561	Cases completed as (a) Midwife ...	1,826
458	(b) Maternity Nurse ...	395
29,295	Nursing Visits ...	22,598
17,054	Other Visits ...	11,827
2,342	Attendances at Ante-natal Clinics ...	1,168
	(ii) <i>Pupil Midwives—</i>	
1,730	Cases completed as Midwife ...	1,367
29,163	Nursing Visits ...	23,751
12,425	Other Visits ...	10,843
1,164	Attendances at Ante-natal Clinics ...	1,217
	(iii) <i>Medical Students—District Midwifery—</i>	
255	Cases attended ...	200
	(e) <i>Attendances at Clinics—</i>	
	(i) <i>Municipal Ante-natal (Medical Officers Sessions).</i>	
2,829	Verrier Road ...	3,137
3,410	Bedminster ...	3,899
1,971	Brislington (Wick Road) ...	924
—	Brislington (Water Lane) ...	749
2,273	Knowle West ...	2,474
4,890	North Bristol ...	4,522
1,516	Portway ...	1,607
3,149	Central ...	2,684
3,479	South Bristol ...	3,553
4,094	Southmead ...	4,231
3,582	Speedwell ...	3,294
2,198	Clifton ...	2,796
402	Frenchay ...	516
33,793		34,386
22.3	Average per session ...	22.7
5,940	New Patients ...	5,406
	(ii) <i>Municipal Ante-natal (Midwives Sessions)—</i>	
2,043	Verrier Road ...	935
2,626	Bedminster ...	1,716
632	Brislington (Wick Road) ...	355
—	Brislington (Water Lane) ...	13
1,121	Knowle West ...	895
2,384	North Bristol ...	1,619
572	Portway ...	486
659	Central ...	287
1,618	South Bristol ...	1,112
2,152	Southmead ...	1,717
1,366	Speedwell ...	997
369	Clifton ...	237
273	Frenchay ...	219
15,815		10,588
20.2	Average per session ...	13.5
142	New Patients ...	35
	(iii) <i>Post natal Clinics—</i>	
902	Central ...	858
416	Bedminster ...	483
515	Speedwell ...	459
702	Southmead ...	768
144	Portway ...	152
448	Knowle ...	461
218	Clifton ...	270
346	Bristol South ...	299
186	Verrier Road ...	326
45	Frenchay ...	95
3,922		4,171
11.0	Average per session ...	11.3
2,405	New Patients ...	2,442

Maternity and Child Welfare—continued.

1947		1948
	(iv) <i>Consultative Ante-natal Clinics—</i>	
1,107	Central	955
993	Bedminster	919
550	Speedwell	448
1,395	Southmead	1,511
294	Portway	286
464	Knowle	426
638	Bristol South	642
1,327	Bristol North	1,076
728	Verrier Road	581
24	Clifton Health Centre	1
7,520		6,845
18.5	Average per session	15.2
2,815	New Patients	2,265
	(v) <i>Municipal Infant Welfare Centres—</i>	
	Mothers—	
5,879	Central	5,853
9,324	Speedwell	9,151
6,718	Southmead	6,663
3,701	Portway	3,760
7,785	Knowle West	8,295
6,694	South Bristol	6,260
5,686	Bedminster	5,077
2,521	Barton Hill	2,466
1,250	Headley Park	1,298
2,052	Moorfields	2,079
1,900	Brislington (Salisbury Road)	1,668
3,991	Clifton	4,245
5,619	North Bristol	5,437
5,598	Brynland Avenue	6,035
—	Redcross Street	57
—	Avonmouth	889
1,556	Brislington (Water Lane)	2,135
1,472	Guildford Road	1,494
1,927	Frenchay	1,141
3,467	Bedminster Down	2,296
2,035	Durdham Down	5,711
1,810	Eastville	2,573
4,483	Hotwells	2,185
646	Newry Walk	6,615
1,530	Redcliffe	974
1,374	Sea Mills	2,148
390	Westbury	2,138
	Dovercourt Road	2,286
89,408		100,929
32.8	Average attendance per session	32.2
	Children under 1 year—	
4,061	Central	3,992
7,912	Speedwell	7,273
5,310	Southmead	4,996
2,617	Portway	2,695
5,947	Knowle West	5,666
6,350	South Bristol	5,190
4,726	Bedminster	3,826
2,084	Barton Hill	1,901
869	Headley Park	986
1,630	Moorfields	1,495
1,777	Brislington (Salisbury Road)	1,449
3,517	Clifton	3,481
5,283	North Bristol	4,951
4,818	Brynland Avenue	4,987
—	Brislington (Water Lane)	1,830
—	Redcross Street	33
1,459	Avonmouth	667
1,146	Guildford Road	1,272
1,598	Frenchay	794
2,869	Bedminster Down	1,693
1,687	Durdham Down	4,559
1,408	Eastville	2,232
3,347	Hotwells	1,646
506	Newry Walk	4,724
1,253	Redcliffe	729
1,075	Sea Mills	1,593
328	Westbury	1,617
	Dovercourt Road	1,941
73,577		78,218
27.0	Average attendance per session	25.5

Maternity and Child Welfare—continued.

1947		1948
	<i>Municipal Infant Welfare Centres (contd.).—</i>	
	Children between 1 and 5 years—	
1,954	Central	1,983
1,613	Speedwell	2,038
1,877	Southmead	2,104
1,729	Portway	1,721
2,603	Knowle West	3,221
954	South Bristol	1,256
1,206	Bedminster	1,487
476	Barton Hill	594
392	Headley Park	394
471	Moorfields	590
231	Brislington (Salisbury Road)	377
624	Clifton	1,016
590	North Bristol	626
1,156	Brynland Avenue	1,471
—	Brislington (Water Lane)	351
—	Redcross Street	37
199	Avonmouth	310
523	Guildford Road	257
411	Frenchay	513
698	Bedminster Down	621
312	Durdham Down	1,651
534	Eastville	369
1,115	Hotwells	642
159	Newry Walk	2,507
409	Redcliffe	309
322	Sea Mills	800
95	Westbury	669
	Dovercourt Road	540
20,653		28,454
7.6	Average attendance per session	9.3
	New Patients—	
7,575	Children under 1 year	7,050
988	Children between 1 and 5 years	1,118
	(vi) <i>Birth Control—</i>	
400	Attendances	374
	(vii) <i>Minor Ailments—</i>	
3,646	Inspection	3,111
10,183	Treatment	10,328
2,362	New Patients—Inspected	2,028
3,308	Treated	3,313
43	Ante and Post Natal Exercises	203
19	New Patients	73
	(viii) <i>Sterility Clinic—</i>	
335	Attendances	378
84	New Patients	105
	<i>Backward Children—</i>	
206	Attendances	184
18	New Patients	13
	<i>Special Diagnostic Clinic—</i>	
1,128	Attendances	1,339
326	New Patients	418
	(f) <i>Health Visitors—</i>	
	Visits—	
1,075	Ante-natal	1,049
9,427	Primary	7,804
28,859	Under one year	30,218
43,457	1—5 years	58,345
1,256	Eye cases	1,241
109	Ophthalmia Neonatorum	62
5	Summer Diarrhoea	3
26	Neo-natal deaths	26
9,520	Other special visits	8,302
18,929	Blank visits	19,396
520	Tuberculosis	239
287	Tuberculosis—Blank visits	153
1	Unmarried mothers	154
42	Children and Young Persons Act	46
	Sessions attended—	
10,534	Clinics	10,538
3,052	Nursery schools and classes (hours)	2,925

Maternity and Child Welfare—continued.

1947		1948
	(g) <i>Inspector of Midwives and Nursing Homes—</i>	
	Visits—	
	1. Midwives Acts—	
214	Routine	199
586	Special	620
114	2. Home Helps	100
239	3. Blank visits	220
36	4. Nursing Homes (Routine)	38
56	5. Nursing Homes (Special)	24
	6. Midwives cases	670
	(h) <i>C.M.B. Forms—</i>	
1,150	A. Medical Help	789
7	B. Death	4
32	C. Stillbirth	20
16	D. Laying out the dead	14
21	E. Liability of infection	23
103	F. Artificial feeding	262
	(i) * <i>Child Life Protection—</i>	
181	Visits—Child Life Protection Officer ...	88
328	Health Visitor	141
49	Children under supervision at beginning ...	40
35	„ added to register	22
	„ removed from register—	
7	(a) at age limit	1
19	(b) transferred to relatives	12
2	(c) legally adopted	4
16	(d) died	—
40	(e) for other reasons	4
	Children under supervision at end	41
	Persons registered as receiving children—	
16	(a) Individual foster mothers	14
2	(b) Persons i/c Vol. Homes and Institutions	—
	(c) Persons i/c Residential Nurseries, etc., for profit, etc.	—
—	Prosecutions under the Act	—
	(j) * <i>Adoption of Children (Regulation) Act, 1939—</i>	
627	Visits by Adoption Visitor	319
549	„ „ Health Visitor	272
	Applications received—	
97	(a) Children	46
130	(b) Adopters	86
	Children placed on trial with prospective adopters	34
71	Adoptions completed	29
65		

* September 1st, 1948. Work handed over to newly constituted Children's Committee appointed under 1948 Children's Act.

Table 5—Orthopædic Department.

1947			1948	
Patients	Attendances		Patients	Attendances
271	369	Inspections :—	294	411
1,091	1,713	M. & C. W.	1,145	1,685
141	284	School	136	264
		Chest		
1,503	2,366	Totals ...	1,575	2,360
		Treatment :—		
51	740	M. & C. W.	71	1,118
354	4,384	School	307	4,793
405	5,124	Totals ...	378	5,911

Table 6—Foot Clinic.

1947			1948	
Patients	Attendances		Patients	Attendances
11	21	M. & C. W.	18	33
664	2,918	School	883	4,173
675	2,939	Totals ...	901	4,206

Table 7—Dental Department.

1947			Service.	1948		
Schools	Expectant Mothers & Nursing Mothers	Infants		Schools	Expectant Mothers & Nursing Mothers	Infants
45,427	1,626	1,078	Inspected	43,499	1,532	1,284
29,101	1,615	1,059	Requiring Treatment	29,226	1,497	1,229
24,562	1,522	1,298	Treated	26,142	1,105	1,617
36,878	3,979	1,986	Attendances	39,553	3,967	2,545
			Fillings :—			
14,989	1,291	—	Permanent Teeth	14,549	1,086	—
1,406	—	284	Temporary „	1,086	—	329
			Extractions :—			
4,487	4,527	—	Permanent Teeth	4,285	4,047	—
21,342	—	1,990	Temporary „	21,692	—	2,399
13,073	1,002	1,007	Anæsthetic Gas	13,324	1,026	1,284
			Other operations :—			
7,070	1,268	—	Permanent Teeth	7,385	1,255	—
5,406	—	635	Temporary „	8,116	—	835
			Orthodontic :—			
437	—	—	New patients	483	—	—
1,601	—	—	Total attendances	1,190	—	—
448	—	—	Impressions taken	493	—	—
248	—	—	X-rays	103	—	—

Table 8—Ear, Nose and Throat Department.

1947			1948	
Patients	Attendances		Patients	Attendances
76	114	Inspections :—	167	266
761	1,296	M. & C. W.	1,709	3,198
67	119	School	75	112
		Chest		
904	1,529	Totals ...	1,951	3,576
29	285	Treatment :—	35	310
388	5,456	M. & C. W.	476	8,384
		School		
417	5,741	Totals ...	511	8,694

Table 9—X-Ray Department.

1947			1948		
Film	Screen	Total	Film	Screen	Total
6,102	3,844	9,946			
4,205	—	4,205			
972	—	972			
499	—	499			
2,808	—	2,808			
14,586	3,844	18,430			
2,574	340	2,914			
17,160	4,184	21,344			
<i>Central Health Clinic</i>					
		Chest	5,354	3,756	9,110
		G.P.'s	5,279	—	5,279
		Schools	1,621	—	1,621
		M. & C. W.	468	—	468
		Others	2,886	—	2,886
<i>Southmead Hospital—</i>					
		(to 7/7/48 only)			
		Out-Patients	15,608	3,756	19,364
		Totals ...	2,622	298	2,920
			18,230	4,054	22,284

Table 10—Scabies Baths.

	Central Health Clinic		Southmead Hospital		Feeder Road	Totals	
	1947	1948	1947	1948	1948	1947	1948
Children	1,284	773	317	198	13	1,601	984
Infants	500	232	119	66	—	619	298
Adults							
Females	1,051	504	167	70	—	1,218	574
Males	763	113	—	—	250	763	363
Total Attendances	3,598	1,622	603	334	263	4,201	2,219
† New Patients—							
Children	666	383	123	87	6	789	476
Infants	251	117	54	31	—	305	148
Adults							
Females	553	262	68	30	—	621	292
Males	420	61	—	—	130	420	191
Total New Patients	1,890	823	245	148	136	2,135	1,107

In addition to the above, 66 patients involving 130 attendances were dealt with for adjacent authorities.

† Included in "Total Attendances."

Table 11—Dispensary.

(1) Establishments served—									1948
Central Health Clinic									
Health Centres and Clinics (35)									
Hospitals and Institutions (14) (until July, 4th,									
Day Nurseries, Special Nursery									1948)
Schools and Classes (72)									
Municipal Midwives (69)									
Social Welfare District Medical Officer									
(2) Turnover of Drugs, Dressings, etc.—									
Quantity of mixtures made	...	...	...	gallons	...	...	...	...	1,278
" ointment made	...	...	...	lbs.	...	...	...	...	610
Vit. A. & D. Emulsion	...	...	...	gallons	...	...	...	...	219
Vit. A. & D. Capsules	...	...	...	caps.	...	...	...	...	267,000
Whooping Cough Vaccine	...	...	...	cc	...	...	...	...	345
A.P.T. Diph. Proph. (5 cc vials)	...	...	...	cc	...	...	...	...	11,500
Other Medicines dispensed	...	...	...	gallons	...	...	...	...	505
Lint and Cotton Wool	...	...	...	lbs.	...	...	...	...	3,759
Insulin supplied	...	...	...	cc	...	...	...	...	18,910
Anahæmin supplied	...	...	...	1 cc ampoules	...	...	...	...	866
(3) Bulk purchase of Drugs—				lbs.	...	...	...	...	4,124
				gallons	...	...	...	...	315
				tabs.	...	...	...	...	1,468,000

Table 12—Diphtheria Immunisation.

1947								1948
	(i) <i>Diphtheria</i> —Number of immunisations completed at							
	Schools, Clinics and Nurseries, General Practitioners							
	during the year.							
5,137	Full course—Ages 0—5 years	...	...	...	...	...	...	6,790
1,093	Ages 5—15 years	...	...	...	...	...	...	1,242
3,041	Booster dose —15 years	...	...	...	...	...	...	3,792
9,271	Totals	...	...	...	...	...	...	11,824

Table 13—Chest Clinic.

1947		1948 (to 30/6/48)
1,600	New Patients—adults	793
653	children	318
9,274	Re-examination—adults	4,487
1,670	children	701
12,032	Total attendances (including above)—adults	5,893
2,917	children	1,424
521	Home Visits—	
1,387	Doctors	264
243	Nurses	1,191
230	Injections—Tuberculin	104
3,641	Other	138
815	Artificial pneumothorax refills	1,727
284	Ultra-violet light cases	486
119	Orthopædic Surgeon	142
14,151	E.N.T. Surgeon	59
1,481	X-rays (complete year)	14,389
21	Sputum examinations	770
53	Personal consultations—at home	12
	Other	34
623	Admissions to Institutions:—	
170	Adults	315
	Children	88
3,807	Cases on Register at end of period—	
1,156	Pulmonary	3,813
	Non-Pulmonary	1,147

Table 14—Tuberculosis Welfare Department.

1947		1948
	Allowances in cash.	
	Total application granted (to 4th July, 1948)—	
242	(a) Maintenance	98
55	(b) Discretionary (also included in (a))	23
39	(c) Special payments	33
38	(d) Social Welfare	13
311	Patients in receipt of allowances at end of period—	
	(Transferred to care of Assistance Board, 4/7/48) ...	330
	Maintenance allowance (Nat. Assist. Board) subsequent to 4/7/48—	
—	New cases of Pul. T.B. certified eligible for special financial assistance	195
	Allowances in kind—during the year.	
190	Free milk grants—new cases	177
213	Total patients in receipt of milk at end of year	235
	Voluntary Care Committee.	
154	Allowances in kind	193
18	„ „ cash	33
	Rehabilitation.	
64	Patients referred to Ministry of Labour for suitable employment	99
2	Patients introduced to Training Centre	11
	„ successfully introduced to employment—	
2	(a) Part-time	6
27	(b) Full-time	42

Table 15—Mass Radiography.

1947				To June, 1948		
Males	Females	Total		Males	Females	Total
22,012	13,675	35,687	Miniature X-ray— Number of films made	12,730	9,438	22,168
1,195	515	1,710	Large films—			
102	95	197	New cases	819	452	1,271
—	—	—	Repeat	61	47	108
			Other	—	—	—
276	126	402	Clinical examinations—			
127	112	239	First examinations	204	111	315
			Re-examinations	94	55	149

Table 16—Venereal Diseases.

1947				Clinics	To 5/7/48			
Guardian House	Avon-mouth	South-mead	Frenchay General Hospital		Guardian House	Avon-mouth	South-mead	Frenchay General Hospital
1,970	536	154		New Patients	825	272	91	
202	32	14		Syphilis	72	12	10	
8	—	—		„ (congenital included above)	5	—	1	
7	17	1		Soft Chancre	2	10	—	
519	235	14		Gonorrhœa	150	140	7	
1,242	252	125		Non-Venereal	596	110	73	
3,572	685	314		Total Patients	2,027	392	230	
19,322	4,021	1,787		Total Attendances	9,088	1,927	1,075	
19,058	2,820	1,766		Individual attention by Medical Officer	8,940	1,333	1,075	
264	1,201	21		Investigation, Dressings, etc.	148	594	—	
1,213	70	111		Under treatment <u>end of year</u>	805	51	92	
752	14	83		Syphilis	516	6	76	
1	—	—		Soft Chancre	—	—	—	
301	36	9		Gonorrhœa	136	31	—	
159	20	19		Non-Venereal	153	14	16	
—	—	—	43	In-patients	—	—	—	161
—	—	—	8,174	In-patient days	—	—	—	4,237

Table 17—Incidence of Venereal Diseases, 1939-1948.
BRISTOL.

	1939.		1940.		1941.		1942.		1943.		1944.		1945.		1946.		1947.		1948.	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Total Syphilis ...	74	74	85	30	144	61	225	73	238	117	152	137	120	140	186	140	156	92	122	79
Early Syphilis (included in total)	43	13	42	8	114	23	182	43	199	73	126	97	89	78	139	93	120	60	77	50
Gonorrhœa ...	377	125	331	98	398	124	440	157	526	186	317	235	354	176	600	154	634	134	448	92
Chancroid ...	5	—	8	—	2	—	38	—	7	—	31	—	35	5	34	4	24	1	26	1

Table 18—V.D. Welfare Department.

1947			1948	
M.	F.		M.	F.
864	530	Number of cases on Welfare Officer's Register ...	580	337
2,289	687	Number of new cases added during year ...	1,995	606
201	238	Attendances at Clinics ...	245	260
		Interviewed in Clinics—		
425	325	(a) Primary cases ...	398	226
530	684	(b) Current cases ...	499	608
340	190	(c) Hospital In-patients ...	253	165
		Visiting—		
144	168	(a) Primary cases—First visit ...	109	111
27	7	Second visit ...	21	7
8	2	Repeat visit ...	4	2
116	149	Examined ...	83	90
707	526	(b) Defaulters—First visit ...	619	521
48	33	Second visit ...	47	41
17	7	Repeat visit ...	18	8
539	340	Return for treatment ...	512	351
113	121	Number of visits for other specified purposes ...	111	114
1,064	864	Total number of visits for all purposes ...	929	805
70	109	Number of consultations with Voluntary bodies ...	67	96
		Rehabilitation—		
27	29	(a) Successfully introduced to employment ...	14	11
10	9	(b) Successfully introduced to club or other suitable organisation ...	5	5

D.—HOSPITALS, INSTITUTIONS AND NURSERIES.

Table 1—Hospitals.

No. of Beds occupied 31.12.47		Beds Provided	No. Ad- mitted	Births (Live)	No. Dis- charged	No. of deaths	No. of Beds occupied 4.7.48	Patient Days	Wait- ing List
249	Southmead—								
56	General ...	309	2,443	—	2,219	261	212	61,730	200
109	T.B. ...	66	86	—	74	12	56	—	—
	Maternity ...	153	1,705	1,417	1,687	3	124	22,688	—
31	Mortimer House ...	35	436	387	443	—	24	5,482	—
259	Snowdon Road—								
	General ...	294	170	—	46	89	294	50,184	—
158	Ham Green—								
124	T.B. ...	164	99	—	82	16	159	29,806	100
	Fever ...	314	748	—	763	25	84	18,646	—
33	Charterhouse—								
—	T.B. ...	49	42	—	31	—	44	7,772	—
	Fever ...	55	2	—	2	—	—	46	—
19	Frenchay Hospital—								
12	General ...	17	5	—	1	6	17	3,332	—
42	Thoracic T.B. ...	18	50	—	45	—	17	3,150	83
16	Non-T.B. ...	73	300	—	281	11	50	9,542	159
2	V.D. ...	43	166	—	159	1	22	4,218	—
16	Neuro. Surg. ...	34	34	—	15	2	19	533	38
35	Gen. T.B. ...	16	20	—	10	10	16	2,792	—
81	Nursery ...	78	60	—	35	—	60	7,548	—
31	Frenchay San. ...	95	86	—	89	—	78	13,809	26
2	Winsley San. ...	54	46	—	22	1	54	8,401	3
	Other T.B. Insts. ...	1	1	—	1	1	1	408	—

Table 2—Day Nurseries.

No. on Register 31.12.47	No.	Places Provided 31.12.48	No. added to Register	No. Re- moved from Register	No. of Deaths	No. on Register 31.12.48	Wait- ing List
553	13	520	508	482	—	579	390

Table 3—Home Helps.

1947								1948
328	Total cases helped—							332
240	(a) Maternity	...	...	...	...	...	.	276
	(b) Sickness	...	...	...	...	...	.
3,704	Total days helped—							3,684
3,516	(a) Maternity	...	...	...	...	...	.	3,596
	(b) Sickness	...	...	...	...	...	.

E.—SANITATION, HOUSING, SHOPS ACTS, ETC.

Table 1—Sanitary Inspectors.

1947				1948			
Visits	Re-visits	Total		Visits	Re-visits	Total	
—	—	6,171		—	—	5,534	
—	—	365		—	—	265	
6,650	27,273	33,923		5,989	23,325	29,314	
1	1	2		—	—	—	
20	41	61		15	44	59	
17	22	39		26	18	44	
393	965	1,458		530	1,343	1,873	
157	450	607		243	670	913	
109	179	288		51	110	161	
77	188	265		79	184	263	
83	245	328		60	183	243	
116	299	415		176	485	661	
1	3	4		47	11	58	
18	48	66		11	24	35	
21	40	61		16	31	47	
39	27	66		13	11	24	
37	113	150		41	152	193	
11	29	40		18	65	83	
33	45	78		60	128	188	
529	180	709		432	178	610	
1,361	1,381	2,742		1,652	1,657	3,309	
—	—	458		—	—	10	
Complaints received				Complaints received			
Recommendations for Housing accommodation				Recommendations for Housing accommodation			
Visits—				Visits—			
Dwelling houses (P.H.)				Dwelling houses (P.H.)			
Houses let in lodgings				Houses let in lodgings			
Common lodging houses				Common lodging houses			
Foodshops—Registerable				Foodshops—Registerable			
Not registerable				Not registerable			
Other shops				Other shops			
Bakehouses				Bakehouses			
Workplaces and Offices				Workplaces and Offices			
Factories—Non-mechanical				Factories—Non-mechanical			
Mechanical				Mechanical			
Outworkers				Outworkers			
B.C. Act, 1926, Section 62				B.C. Act, 1926, Section 62			
Smoke observations				Smoke observations			
Offensive trades				Offensive trades			
Entertainment places				Entertainment places			
Tents, Vans and Sheds				Tents, Vans and Sheds			
Keeping of animals				Keeping of animals			
Food inspection				Food inspection			
All other matters				All other matters			
Infectious diseases				Infectious diseases			
In-tima- tion	Statu- tory	Compliance		In-tima- tion	Statu- tory	Compliance	
		I.	S.			I.	S.
2,322	2,136	2,408	1,936	1,823	1,606	1,882	1,333
—	—	—	—	—	—	—	—
1	—	—	—	—	—	—	—
1	—	1	—	4	—	1	—
52	2	48	4	89	—	85	6
49	—	42	5	85	—	65	2
13	—	13	3	7	—	9	—
6	—	10	1	10	—	5	1
17	—	23	2	19	—	7	—
12	—	22	—	46	—	49	—
—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
1	—	1	—	1	—	1	—
—	—	1	—	—	—	—	—
5	—	2	—	7	—	7	—
—	—	—	—	1	—	1	—
6	—	8	—	7	—	14	3
—	—	—	—	—	—	—	—
16	—	5	—	11	1	11	1
Notices—				Notices—			
Dwelling houses (P.H.)				Dwelling houses (P.H.)			
Houses let in lodgings				Houses let in lodgings			
Common lodging houses				Common lodging houses			
Foodshops—Registerable				Foodshops—Registerable			
Not registerable				Not registerable			
Other shops				Other shops			
Bakehouses				Bakehouses			
Workplaces and Offices				Workplaces and Offices			
Factories—Non-mechanical				Factories—Non-mechanical			
Mechanical				Mechanical			
Outworkers				Outworkers			
B.C. Act, 1926, Section 62				B.C. Act, 1926, Section 62			
Smoke observations				Smoke observations			
Offensive trades				Offensive trades			
Entertainment places				Entertainment places			
Tents, Vans and Sheds				Tents, Vans and Sheds			
Keeping of animals				Keeping of animals			
Food inspection				Food inspection			
All other matters				All other matters			

Table 2—Remedial Action.

1947		1948
	<i>Drainage Works—</i>	
86	New drains laid	88
631	Drains repaired	355
614	Choked drains cleared	545
97	Tests made	112
	<i>Sanitary Conveniences—</i>	
244	Flushing appliances introduced	266
34	Additional closets fitted	3
4	Separate closets for sex provided	2
228	New pans fitted	257
—	Action re bathroom and geyser vent	8
1	Urinals fitted	6
299	Other works	667
41	Intervening vent space provided	85
13	Cesspools abolished	—
	<i>Water Supplies—</i>	
235	New and additional installation	271
8	Hot water installed	51
—	Wells closed	1
	<i>Other Sanitary Fittings—</i>	
123	New sinks fitted	137
6	Additional sinks provided	1
22	Wash basins provided	14
	<i>Other Works—</i>	
1,231	Roofs repaired	1,155
824	Dampness remedied	658
3,742	Other new and repair works	3,884
62	Yards paved and drained	15
249	Houses cleansed—Dirty	147
38	Verminous	202
2	Food store installed—cooking facilities improved	2
14	Lighting improved	42
56	Ventilation improved	84
3	Meal rooms provided	5
8	Heating provided	7
—	Exhumations	70
	<i>Keeping of Animals—</i>	
1	Provision of manure receptacles	1
1	Drainage provided	9
1	Removal of manure	—
	<i>Aged and Infirm Persons—</i>	
11	Removals—Voluntary	5
1	Court order	—
	<i>Smoke Observations—</i>	
6	Infringements—Found	12
6	Remedied	12
	<i>Noise—</i>	
3	Nuisances—Found	6
3	Abated	6
	<i>Other Nuisances—</i>	
351	Found	498
351	Abated	498

Table 3—Housing Acts.

1947		1948
	<i>Inspections—</i>	
—	Section 9	—
101	„ 11 and 12	163
—	Clearance area	—
	<i>Represented to Committee—</i>	
—	Section 9	—
101	„ 11 and 12	163
—	Clearance area	—
	<i>Orders Made—</i>	
61	Section 11 (demolition)	55
10	„ 12 (closing orders)	21
5	„ 11 (undertakings to repair accepted)	8
7	„ 11 (undertakings not to use accepted)	1
	<i>Houses Repaired—</i>	
—	Section 9—Informal	—
15	„ 9—Formal	—
—	„ 9—Formal by Corporation in default	—
10	Undertakings to repair	4
—	Undertakings not to use cancelled after repair	1
8	Other repairs	6

Table 4—Dairies, Milkshops, etc.

1947	REGISTRATIONS.	1948
859	Personal	858
	Milk :—	
118	Dairies	113
91	Dairies outside City retailing within	95
600	Milkshops	601
50	Cowsheds	49
	Ice-cream :—	
2	Premises for manufacture	2
120	Manufacture, sale and storage	77
187	Storage	333
	Licences :—	
	Tuberculin Tested—	
3	To produce	2
—	To produce and bottle	1
12	To bottle and sell	12
24	To sell only	26
10	Supplementary	11
	Accredited—	
12	To produce	10
—	To produce and bottle	—
1	To bottle	—
1	To sell only	1
3	Supplementary	2
	Pasteurised—	
8	To produce and sell	10
55	To sell only	58
3	Supplementary	3

Dairies, Milkshops, etc. (contd.).

1947		SAMPLES.	1948	
Samples taken	Samples not complying		Samples taken	Samples not complying
227	16	Pasteurisation Test (Schools)	193	4
97	—	Tubercle Examination (including repeats)—		
354	—	City	141	—
611	—	Somerset	476	—
12	—	Gloucestershire	628	—
4	—	Other counties	8	—
142	61	Tuberculin Tested (certified)	4	—
11	2	Tuberculin Tested	85	13
141	44	Pasteurised	17	2
188	5	Accredited	114	39
331	37	Heat-treated	284	8
1,322	—	Institution Tests	343	19
183	106	Under Food and Drugs Act (Milk) ...	1,673	—
377	47	Ice-cream	436	279
281	73	{ Waters	356	31
1,337	—	{ Others	483	5
129	—	Fæces	581	—
294	113	Plant tests	156	2
—	—	Churn or bottle rinses	184	71
		Blood tests	—	—

1947	VISITS AND NOTICES.								1948
	<i>Visits—</i>								
1,085		Dairies							1,003
125		Milkshops							89
228		Cowsheds and Farms							239
228		Corporation Institutions							272
251		Schools							305
3,484		Others							3,058
980		Ice-cream premises							1,843
		Pharmacy and Poisons							2,067
	<i>Notices—</i>								
6		Verbal							16
11		Verbal compliance							17
22		Written							42
24		Written compliance							33
	<i>Remedial Action—</i>								
	<i>Premises—</i>								
1		New built							3
17		Altered or repaired							25
5		Roofs repaired							4
19		Cleansed—Dairies							28
27		Other defects							22
6		Plants installed—sterilising							10
3		New or additional water supply installed ...							1
8		Hot Water facilities							36
	<i>Drainage—</i>								
2		Tests made							1
1		New drains							—
2		Repairs							1
4		Chokages cleared							1
	<i>Water Closets—</i>								
2		Flushing appliances							1
4		New pans							4
8		Other repairs and cleansing							10
—		Cesspools abolished							—
—		Cesspools provided							—
9		Other nuisances abated							8

Table 5—Inspection of Meat and other Foods.

1947		1948
	<i>Visits—</i>	
492	Meat Markets	550
3,850	Shops	6,167
4	Cattle Markets and Railway Sidings	1
—	Fish curing premises	—
42	Sausage making premises	43
—	Cold Stores	2
199	Connection with food poisoning	85
46	Street traders	4
98	Institutions	92
1,535	Slaughterhouses	1,727
	<i>Remedial Action—</i>	
—	Slaughterhouses cleansed	—
—	Slaughterhouses rebuilt, repaired or altered	—
—	Sanitary defects, etc.	—

1947			1948	
City	Abattoir		City	Abattoir
		<i>Animals examined</i>		
9,403	11,888	Beasts	9,433	12,107
2,346	5,309	Calves	1,074	2,638
29,726	35,613	Sheep	26,578	30,395
195	128	Pigs	98	884
8,036	—	Pigs (Imported)	7,380	—
6,756	—	Bacon	11,183	—
9	4	Goats	1	22
		<i>Carcases destroyed—</i>		
225	458	Beasts	266	500
6	22	Calves	5	11
78	97	Sheep	26	29
28	7	Pigs	30	24
—	—	Goats	—	—

CARCASES INSPECTED AND CONDEMNED DURING THE YEAR 1948.

	Beasts	Calves	Sheep and Lambs	Pigs	Goats
Number killed	21,540	3,712	56,973	12,165	23
Number inspected	21,540	3,712	56,973	12,165	23
All diseases EXCEPT Tuberculosis— Whole carcasses condemned	40	9	55	13	—
Carcases of which some part or organ was condemned	10,568	16	22,595	282	—
Percentage of the number inspected affected with disease other than Tuberculosis	49.71%	0.67%	39.25%	2.42%	—
TUBERCULOSIS ONLY—					
Whole carcasses condemned	726	7	—	41	—
Carcases of which some part or organ was condemned	4,794	14	—	867	—
Percentage of the number inspected affected with Tuberculosis	25.62%	0.56%	—	7.46%	—

It is estimated that approximately 90 per cent. of the figure 10,568, quoted for carcasses of which some part or organ was condemned for diseases except tuberculosis, would be livers or parts of livers condemned for fluke, cirrhosis, anginoma, or possibly abscess.

1947		1948
Tons		Tons
171	<i>Meat destroyed from—</i>	
—	Slaughterhouses and shops	203
204	Cold Stores	—
168	Abattoir	215
	Fish, Poultry, Vegetables, etc.	249

Table 6—Disinfections, Drain Tests, etc.

1947		1948
4,051	Premises disinfected	3,999
70,317	Articles disinfected	98,152
1,786	Articles destroyed	950
721	Vermin repression—by spraying	713
1	by fumigation	—
158	Vermin baths—Men	159
14	Women	3
750	Foodstuffs, etc., destroyed	692
123	Drain tests	127
518	Other work	561

Table 7—Rat Repression.

1947					1948			
Business Houses	Houses	Other	Total		Business Houses	Houses	Other	Total
4	2	1	7	Complaints incompletely dealt with b/forwd. ...	11	23	2	36
759	1,437	47	2,243	Complaints received ...	661	1,345	186	2,192
763	1,439	48	2,250		672	1,368	188	2,228
				Remedial action—				
				Infestation cleared—				
646	1,054	33	1,733	By Corporation ...	516	920	133	1,569
16	31	—	47	By occupiers ...	12	40	—	52
90	331	13	434	No action required ...	67	352	15	434
11	23	2	36	Incompletion at end of year carried forward ...	77	56	40	173
763	1,439	48	2,250		672	1,368	188	2,228
Avon-mouth	Bristol	Portis-head	Total		Avon-mouth	Bristol	Portis-head	Total
				Rats recovered—				
				Docks, quays, wharves, etc.—				
963	125	2	1,090	Brown	279	28	6	313
463	39	9	511	Black	419	15	8	442
—	—	—	—	Species not recorded ...	—	—	—	—
673	39	—	712	Examined for plague ...	385	10	7	402
2,475	41	1	2,517	Mice	136	8	9	153
				City—				
				Brown				294
				Black				370
				Species not recorded ...				—
				Examined for plague ...				56
				Mice				717

Table 8—Shops Acts and Young Persons.

1947		1948
	<i>Visits—</i>	
4,744	Retail	6,379
113	Wholesale	160
	<i>Re-visits—</i>	
1,454	Retail	1,128
24	Wholesale	32
	<i>Infringements—</i>	
756	Failure to exhibit notices	726
70	Half holiday and statutory holiday	77
14	Hours of young persons	14
48	Meal intervals	46
6	Seats for female assistants	3
	<i>Assistants' Facilities Improved—</i>	
24	Sanitary	18
3	Heating	2
—	Ventilation	—
4	Facilities for meals	—
1	Lighting	2
2	Washing	3
97	Referred to C.S.I. (Section 10)	311
136	Verbal warnings	133
16	Warning letters	24
3	Legal proceedings	—
—	Visits to cinemas	—
	<i>Shops Acts and Sunday Entertainment—</i>	
77	Visits	76
1	Re-visits	2
6	Infringements—Holidays	3
1	Records	2
	<i>Young Persons (Employment) Act, 1938—</i>	
55	Visits	62
3	Re-visits	2
3	Infringements	1
3	Verbal warnings	1

F.—BRISTOL PORT HEALTH AUTHORITY. 1948.

Table A—Amount of Shipping entering the Port during the year 1948.
(Avonmouth, Portishead and Bristol).

	Number *	Tonnage *	Number inspected		Number reported to be defective	Number of vessels on which defects were remedied	Number of vessels on which defects were found and reported to Ministry of Transport Surveyors	Number of vessels reported as having, or having had during the voyage, infectious disease on board
			By the Medical Officer of Health	By the Sanitary Inspector				
<i>Foreign—</i>								
Steamers	...		638	638	219	210	5	}
† Motor	...	2,626,476	257	257	43	40	—	
Sailing	...		1	1	1	1	—	
Fishing	...		—	—	—	—	—	
Total Foreign	896	2,626,476	896	896	263	251	5	12**
<i>Coastwise—</i>								
Steamers	...		—	389	46	46	—	}
† Motor	...	1,201,986	—	311	6	6	—	
Sailing	...		—	—	—	—	—	
Fishing	...		—	—	—	—	—	
Total Coastwise	9,040	1,201,986	—	700	52	52	—	
Total Foreign and Coastwise	9,936	3,828,462	896	1,596	315	303	5	12**

† Includes mechanically propelled vessels other than steamers.

* Figures supplied by Port Authority. The foreign tonnage includes vessels entering from a coastwise port to load for a foreign port.

** Excluding vessels having venereal disease on board.

CHARACTER OF TRADE OF PORT.

Table B—(a) Passenger Traffic during the year—1948.

No. of Passengers					1st Class	2nd Class, 3rd Class, Transmigrants	Totals
<i>Inwards—</i>							
Aliens	...	...	...	226	—	226
British	...	...	...	2,564	—	2,564
<i>Outwards—</i>							
Aliens	...	...	...	125	—	125
British	...	...	...	2,005	—	2,005

PRINCIPAL IMPORTS—1948.

Table B—(b) Cargo Traffic.

Commodities			Tons
Grain	Tons	—	982,076
Oilseeds and Nuts	"	—	25,781
Feeding Stuffs	"	—	125,847
Cereal Products for human consumption	"	—	87,252
Cocoa (and Chocolate)	"	—	24,356
Eggs—Fresh and Dried	"	—	2,423
FRUIT :			
Bananas	Bunches	2,215,967	34,759
Oranges and Lemons	Cases	352,562	14,548
Other Green Fruit	Tons	—	30,429
Canned	"	—	5,438
Dried	"	—	10,443
Milk—Dried and Evaporated	"	—	736
METALS AND ORES :			
Brass	"	—	69
Copper	"	—	17,145
Iron	"	—	4,916
Lead	"	—	4,221
Spelter	"	—	18,975
Zinc Concentrates	"	—	100,789
Paper	"	—	21,681
Petroleum	"	—	1,379,004
Phosphate of Lime	"	—	117,059
PROVISIONS :			
Bacon	"	—	1,583
Butter	"	—	25,292
Cheese	"	—	11,686
Lard	"	—	471
Canned Meat	"	—	10,304
Frozen Meat	"	—	69,348
SUGAR :			
Refined	"	—	—
Unrefined	"	—	3,975
Glucose	"	—	—
Molasses	"	—	16,984
Tobacco	"	—	34,028
Wine	Pipes	6,207	3,724
	Dozens	10,130	253
Spirits	Pipes	452	271
	Dozens	85,368	1,713
Wood and Timber	Tons	—	110,722
Woodpulp	"	—	77,311
All other goods	"	—	148,367
TOTAL FOREIGN IMPORTS			3,523,979

PRINCIPAL EXPORTS—1948.

Chemicals :—						
Salt Cake	...	...	...	...	...	2,530
Other kinds	...	...	...	...	...	6,525
Clay	...	...	...	...	...	10,162
Coke	...	...	...	...	...	16,898
Earths	...	...	...	...	...	880
Iron	...	...	...	...	...	19,896
Paper	...	...	...	...	...	566
Strontia	...	...	...	...	...	3,752
All other goods	...	...	...	...	...	83,014
TOTAL FOREIGN EXPORTS						144,223

Table C—Cases of Infectious Sickness landed* from vessels.

Disease	No. of Cases during 1948		No. of vessels concerned	Average No. of cases for previous 5 years
	Passengers	Crew		
Infectious diseases, including—				
Pulmonary T.B.	1	1	2	16.0
Influenza	—	2	2	7.8
Dysentery	—	2	1	0.8
Pneumonia	1	2	3	2.8
Venereal Disease	—	528	286	505.2
Mumps	1	1	2 }	3.2
German Measles	—	1	1 }	
Other diseases not included in Table C above landed* from vessels.				
Disease	No. of Cases during 1948		No. of vessels concerned	Average No. of cases for previous 5 years
	Passengers	Crew		
Rheumatism	—	8	6	2.8
Diseases of—				
Nervous system	—	9	8	17.8
Circulatory system	—	3	3	7.2
Respiratory system	—	8	8	10.6
Digestive system	—	20	17	40.2
Genito urinary system	—	7	5	3.8
Skin and cellular tissue	—	34	30	36.2
Bones and organs of locomotion	—	14	14	7.8
Traumatism	—	10	10	34.4
Ill-defined	—	1	1	9.6

* Includes only cases requiring medical attention, but all were not removed from ships to hospital.

Table D—Cases of Infectious Sickness occurring on vessels during the voyage but disposed of prior to arrival.

Disease	No. of Cases during 1948		No. of vessels concerned	Average No. of cases for previous 5 years
	Passen- gers	Crew		
<i>Infectious Diseases, including—</i>				
Chicken pox	1	—	1	2.2

Other diseases not included in Table D above occurring on vessels during the voyage but disposed of prior to arrival.				
--	--	--	--	--

Disease	No. of Cases during 1948		No. of vessels concerned	Average No. of cases for previous 5 years
	Passen- gers	Crew		
Diseases of—				
Nervous System	—	2	2	1.6
Circulatory „	—	1	1	1.0
Respiratory „	—	1	1	0.8
Digestive „	—	1	1	2.6
Traumatism	—	1	1	1.2

Table E—Rats destroyed during the year—1948. On vessels.

[illegible]

Table F—Rats destroyed during the year—1948. In Docks, Quays, Wharves and Warehouses.

[illegible]

Table G—Measures of rat destruction on plague “infected” or “suspected” vessels or vessels from plague infected ports arriving in the Port during the year—1948.

Total No. of such vessels arriving	No. of such vessels fumigated with SO ₂	No. of rats killed	No. of such vessels fumigated with H.C.N.	No. of rats killed	No. of such vessels on which trapping, etc. were employed	No. of rats killed	No. of such vessels on which measures of rat destruction were not carried out
111	—	—	4	60	27	244	81

Table H—Deratisation Certificates and Deratisation Exemption Certificates issued during the year—1948.

Net Tonnage	No. of ships	No. of deratisation certificates issued after fumigation with :—			After trapping, poisoning, etc.	TOTAL	Deratisation exemption certificates issued	TOTAL certificates issued
		H.C.N.	Sulphur	H.C.N. and Sulphur				
Ships up to 300 tons ...	7	—	—	—	—	—	7	7
from 301/1,000 tons ...	21	—	—	—	—	—	21	21
“ 1,001/3,000 ” ...	32	7	—	—	—	7	25	32
“ 3,001/10,000 ” ...	98	18	—	—	—	18	80	98
“ over 10,000 tons ...	—	—	—	—	—	—	—	—
Totals ...	158	25	—	—	—	25	133	158

Table J—Hygiene of Crew's Spaces—Classification of Nuisances.

Nationality of Vessel	Number inspected during the year	Defects of original construction	Structural defects through wear and tear	Dirt, vermin and other conditions prejudicial to health
British ...	1,208	56	233	739
Other nations ...	388	—	3	56
Totals ...	1,596	56	236	795

Table J—(1)

Foreign-going Ships	British		Foreign	
	s.s.	m.v.	s.s.	m.v.
No. of revisits to vessels in dock by P.H.I. ...	1,716	521	804	312
No. of vessels reported defective	196	37	24*	6
No. of vessels—defects remedied	187	34	24*	6

* Includes one sailing vessel—the Finnish barque "PASSAT."

Coastwise Vessels	British		Foreign	
	s.s.	m.v.	s.s.	m.v.
No. of revisits to vessels in dock by P.H.I. ...	918	520	76	82
No. of vessels reported defective	46	5	—	1
No. of vessels—defects remedied	46	5	—	1

Table J—(2) Analysis of action taken.

FOREIGN-GOING				No. Defects reported by For'd Notices, etc., to			No. Ships				
Hygiene of Crew Spaces											
				Found	Rem'd	Not Rem'd	Other PHA's	M.O.T. Surv'r	Owner Master	British	Foreign
Orig. Const. 				56	43	13	8	25	27	13	—
Wear and Tear 				231	225	6	6	3	27	75	2
Dirt and Vermin				692	661	16	16	—	51	206	28
No. of Notices served on ...				Owner/Master 24			B.O.T. 5		Forward 13		

COASTWISE					No. Defects			No. Defects reported by For'd Notices, etc., to			No. Ships	
Hygiene of Crew Spaces												
					Found	Rem'd	Not Rem'd	Other PHA's	M.O.T. Surv'r	Owner Master	British	Foreign
Orig. Const.	...	...	...	...	—	—	—	—	—	—	—	—
Wear and Tear	...	...	...	...	5	5	—	—	—	—	4	—
Dirt and Vermin	...	...	...	...	103	103	—	—	—	1	49	1
No. of Notices served on					...	Owner/Master 1			B.O.T. —		Forward —	

FOREIGN-GOING					No. of Ships Inspected	Original Construction		Wear and Tear		Dirt and Vermin	
Nationality						No. of Ships	No. of Defects	No. of Ships	No. of Defects	No. of Ships	No. of Defects
BRITISH	s.s.	...	...	...	421	10	43	66	206	173	535
„	m.v.	...	...	...	140	3	13	9	22	33	103
FOREIGN	s.s.	...	...	...	218*	—	—	—	—	23	48*
„	m.v.	...	...	...	117	—	—	2	3	5	6
TOTALS ...					896*	13	56	77	231	234	692*

* Includes one sailing vessel—the Finnish barque "PASSAT."

COASTWISE					No. of Ships Inspected	Original Construction		Wear and Tear		Dirt and Vermin	
Nationality						No. of Ships	No. of Defects	No. of Ships	No. of Defects	No. of Ships	No. of Defects
BRITISH	S.S.	...	...	...	365	—	—	2	3	44	92
„	M.V.	...	...	...	282	—	—	2	2	5	9
FOREIGN	S.S.	...	...	...	24	—	—	—	—	—	—
„	M.V.	...	...	...	29	—	—	—	—	1	2
TOTALS ...					700	—	—	4	5	50	103

Table K—Particulars of Foods detained for Reconditioning at Local or other Food Depots.

Description of Food	Quantity	Reason for Detention	Weight in Tons (approx.)
Beef Quarters	1,590	Taint, contamination & mould	90
Pkgs. Offal	1,729	Taint	64
C/s Sheep	6,575	Taint	176
C/s Lamb	5,247	Taint	93
C/s Veal	4	Taint	4
Sides Pork	20	Contamination & sl. decomposition	1
Pkgs. Mutton	96	Ice damage	3
Cases Cnd. Meats	6,867	Wet stained cases	172
Bags Flour	4,401	Wet damage	275
Cases Cnd. Fruit	7,735	Wet stained cases	166
Crates Cheeses	116	Wet damage	9
Brls. Fruit Pulp	726	Excess sulphur dioxide content	206
Bxs. Cnd. Apricot Pulp ...	36	Wet stained	2
TOTAL	—		1,261

Table L—Meats (condemned).

Description	Decomposition and Mould				Brine Stain				Contamination and Taint				Total			
	T.	C.	Q.	lbs.	T.	C.	Q.	lbs.	T.	C.	Q.	lbs.	T.	C.	Q.	lbs.
Beef	6	12	1	14	1	1	3		2	0	20		6	15	3	9
Mutton/Lamb		2	3	22	1	0	3	4	17	1	10		2	1	0	8
Goat Meat										1	4				1	4
Pork		6	0	7				20					6	0	27	
Veal											9					9
Offal		2	1	19		5	2	19					8	0	10	
Poultry			3	10											3	10
Bacon										1	14				1	14
Prepared Meat		1	0	14									1	0	14	
TOTAL	7	5	3	2	1	7	3	18	1	0	1	1	9	13	3	21

Table M—Canned Goods (condemned).

Description	Reason for Condemnation	T.	C.	Q.	Lbs.
Evaporated Milk ...	Blown, burst, pierced, crushed & rust holed			1	17
Fish	"		2	3	2
Vegetables	"				10
Preserves	"		2	3	24
Fruit	"	1	6	1	1
Fruit Juices	"	1	19	3	12
Tomatoes	"		2	3	17
Tomato Paste	"				20
Tomato Puree	"		1	0	11
Tomato Juice	"		4	0	18
Tomato Soup	"				25
TOTAL	"	4	0	3	17

Table N—Miscellaneous Foods (condemned).

Description	Reason for Condemnation	T.	C.	Q.	Lbs.
Fresh Fruit	Decomposed and gross contamination ...		12	1	20
Dried Fruit	Fermentation, mould perished, moth and beetle infested	1	15	2	1
Potatoes	Decomposed	235	1	0	0
Flour	Wet, sourness and fermentation	11	7	2	0
Quaker Oats	Moisture contaminated and rancid	1	14	3	27
Cereals	Wet damaged			1	10
Maize	Oil contamination	2	0	2	0
Fish	Decomposed			1	17
Malted Milk	Perished		1	2	23
Pemmican	Perished		1	2	25
Chocolate	Perished		1	0	0
Fruit Pulp	Gross fermentation and contamination ...	2	19	2	20
TOTAL		255	16	3	3

Table O—Medical Inspection of Aliens. Annual return by the Medical Inspector of Aliens for the year ended 31st December, 1948.

	Total	Number inspected by the Medical Inspector	Number subjected to detailed examination by the Medical Inspector	Certificates Issued					Transmigrants
				Lunatic, Idiot, or M.D.	Undesirable for medical reasons	Physically incapacitated	Suffering from acute infectious disease	Landing necessary for adequate medical examination	
(a) Total number of Aliens landing at the Port ...	170	140	30	—	—	—	—	—	—
(b) Aliens refused permission to land by Immigration Officer ...	56	—	—	—	—	—	—	—	—
(c) Transmigrants ...	—	—	—	—	—	—	—	—	—
Total Aliens arriving at the Port ...	226	140	30	—	—	—	—	—	—

Total number of vessels carrying Alien passengers ... 89
 Number of vessels dealt with by the Medical Inspector ... 89

Appendix X

CONSTITUTION OF THE HEALTH COMMITTEE

Chairman: Alderman J. J. Milton, J.P.

Vice-Chairman: Alderman E. T. Cozens, J. P.

Aldermen: T. Jefferis

Mrs. C. M. Keel

Councillors: G. A. Watson Allan

A. J. Allen

G. P. C. Ford

R. N. Harrison

Mrs. M. A. Hennessy

Mrs. A. E. Nutt

P. W. Salmond

Rev. Mervyn Stockwood

Miss H. Strimer

K. E. Stringer

Mrs. K. I. Wilby

A. J. M. Wright, M.B., B.S. (Lond.), F.R.C.S.

Town Clerk: Alexander Pickard, Esq.

PUBLIC HEALTH STAFF

Medical Officer of Health: (City, Port and Schools):

R. H. Parry, M.D., B.S. (Lond.), F.R.C.P., D.P.H.

Deputy Medical Officer of Health:

R. C. Wofinden, M.D., B.S., D.P.H., D.P.A.

Principal Assistants:*Chief Assistant Medical Officer of Health:*

James Hutton, M.D., D.P.H.

Chief Administrative Assistant:

J. G. Watson

Maternity and Child Welfare:

A. I. Ross, M.D., D.P.H.

School Medical Service:

A. L. Smallwood, M.B., Ch.B., D.C.H., D.P.H.

Port Health:

D. T. Richards, M.R.C.S., L.R.C.P., D.P.H.

Bacteriology:

K. E. Cooper, B.Sc., Ph.D., M.R.C.S., L.R.C.P., A.I.C.

Senior Assistants:

Greta Hartley, M.D., M.M.

R. J. Irving Bell, M.R.C.S., L.R.C.P., D.P.H.

Residential Nurseries:

A. Alison Craig, M.D. (Lond.), D.P.H., D.C.H.

Chief Sanitary Inspector:

F. J. Redstone, F.R.San.I., F.S.I.A.

Matron, External Nursing Services:

Miss L. M. Bendall

Public Analyst:

E. G. Whittle, B.Sc., F.R.I.C.

The following staff were transferred to the Regional Hospital Board and Hospital Management Committees on 5th July, 1948:—

Chest Specialist:

C. J. C. Faill, F.R.C.P., Ed.

Radiology:

J. V. Sparks, B.A., M.R.C.S., L.R.C.P., M.R.C.P., D.M.R.E:

Venereal Disease:

A. E. W. McLachlan, F.R.C.E., M.B., Ch.B., D.P.H.

Frenchay Park Sanatorium and Mass Miniature Radiology:

E. Evelyn Mawson, M.D., Ch.B.

Ham Green Hospital and Sanatorium:

B. A. I. Peters, B.A., M.D., B.C., D.P.H.

Southmead General Hospital, Snowdon Road Hospital, and Mortimer House Maternity Annexe:

P. Phillips, M.Sc., M.D., Ch.B.

Frenchay General Hospital:

W. L. Broadfoot, M.B., Ch.B.

Clinical Pathology:

Dorothy Woodman, M.D., M.Sc., M.R.C.S., L.R.C.P.

F. J. W. Lewis, M.B., Ch.B.



CITY AND COUNTY OF BRISTOL
EDUCATION COMMITTEE

ANNUAL REPORT

OF THE

SCHOOL MEDICAL OFFICER

R. H. PARRY, M.D., B.S. (Lond.), F.R.C.P., D.P.H.

1948

(FORTY-FIRST YEAR)

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BRISTOL EDUCATION COMMITTEE

- Chairman* - Alderman F. C. WILLIAMS M.A.
Vice-Chairman - Councillor R. ST. JOHN READE, M.A.

School Health Service Sub-Committee

- Chairman* - Councillor Mrs. F. M. BROWN

Chief Education Officer

G. H. SYLVESTER, M.A.

School Medical Officer and Medical Officer of Health

R. H. PARRY, M.D., B.S. (London), F.R.C.P., D.P.H.

Chief Assistant School Medical Officer

A. L. SMALLWOOD, M.B., Ch.B., D.C.H., D.P.H.

CITY AND COUNTY of BRISTOL

Population (estimated December, 1948)	..	..	..	..	..	437,400
Schools :—						
Number of School Departments	..	..	..	..	..	186
Average Number on Registers	..	..	..	..	..	52,561
Average Attendance	..	..	..	..	..	46,465

CITY AND COUNTY OF BRISTOL

EDUCATION COMMITTEE

REPORT

of the School Medical Officer for the Year ended 31st December, 1948.

INTRODUCTION

I have pleasure in presenting the fortieth annual report on the work of the School Health Service of the City. The general standard of health and well-being of the children has been fully maintained during the year.

The most important event of the year was the coming into force of the National Health Service Act on the 5th July, 1948. This far reaching measure has had the effect of making some financial changes in the School Health Service, though up to the present time the administration of the services has been carried on as before. Details of the discussions that have taken place on the effect of the Act on the School Health Service in Bristol appear on page 6.

During the year the staff of the Child Guidance Clinic was increased by the appointment of an additional Assistant Educational Psychologist. Dr. R. F. Barbour in his report (page 9) gives some interesting notes on some of the cases dealt with.

Mr. Stride, the Supervisory Dental Surgeon, in his report on the work of the dental service points out that Bristol has been fortunate in being able to retain all the dental surgeons on the staff in spite of the attractions of private practice at the present time. It has been possible to maintain a full dental service to the school children throughout the year (page 11).

Miss D. Wilson, part-time speech therapist, resigned her appointment towards the end of the year and it is proposed to replace her by the appointment of a full-time speech therapist early in 1949. Miss W. E. Cooke in her report on speech therapy mentions some unusual cases where good results have been obtained.

The campaign for the immunisation of children against diphtheria was continued effectively during the year and it is gratifying to be able to record a continued decrease in the number of cases of this disease (page 26).

On page 21 Dr. A. L. Smallwood submits an interesting report on the history of the provision for the care and special education of deaf children in Bristol.

In the early part of the year the residential school for educationally sub-normal senior boys was moved from Purton, Wiltshire, to Kingsdon Manor, Somerset. The new premises provide much better accommodation for these boys and it is hoped that when certain alterations have been made it will be possible to increase the number of boys in residence.

Close co-ordination between the School Health Service and the Public Health Service has been continued throughout the year and I should like once again to express my thanks and appreciation to Mr. Sylvester, Chief Education Officer and his staff, and also to the teachers of Bristol for their ready help and co-operation.

R. H. PARRY.

STAFF

The following staff changes have taken place during the year:—

Medical.

Dr. A. A. K. Datta resigned his appointment as Assistant Medical Officer of Health and School Medical Officer on 31st August, 1948. Dr. H. M. Finzel was appointed part-time Assistant Medical Officer on 26th April, 1948, on the opening of Brislington Minor Ailment Clinic.

Consultants.

Mr. A. Watson Williams was appointed as an additional part-time ear, nose and throat consultant on 1st January, 1948. Dr. F. Gower Bergin relinquished his appointment as radiologist on 5th July, 1948. Miss D. Gregory, part-time ophthalmologist, resigned on 24th June, 1948.

Dental Surgeons.

Mr. G. G. Davis was appointed as full-time dental officer on 1st March, 1948, to fill the vacancy caused by the resignation of Mr. J. D. Rees on 13th December, 1947.

Child Guidance.

Mr. R. Good was appointed as assistant educational psychologist on 16th August, 1948. Mrs. L. Sambrook resigned her appointment as psychiatric social worker on 31st August, 1948, and Miss P. J. Piercy was appointed to fill this vacancy on 1st November, 1948. Mrs. A. Singer, assistant educational psychologist, resigned her appointment on 30th November, 1948.

Speech Therapist.

Miss D. Wilson resigned her appointment as part-time speech therapist on 30th October, 1948.

NATIONAL HEALTH SERVICE

The National Health Service Act came into operation on 5th July, 1948, and following the publication of the Ministry of Education Circular No. 179, discussions were held with the representatives of the South Western Regional Hospital Board on the effect on the various aspects of the School Health Service of the establishment of the National Health Service. As a result of these discussions it was agreed that the specialist clinics hitherto held at the Committee's health centres would continue for the present and would be conducted by the Local Education Authority as before, with the exception of the clinic for the X-ray treatment of ringworm which on the retirement of Dr. F. Gower Bergin was transferred to the Radiological Department of the Bristol United Hospital. Financial responsibility for the payment of the specialists was, however, accepted by the Regional Hospital Board as from 5th July. The dental services, minor ailment inspection and treatment clinics, and arrangements for medical inspections in schools were unaltered and remained the responsibility of the Local Education Authority. Responsibility for the child guidance clinic services similarly remained with the Local Education Authority for the time being, though eventually the policy of the Regional Hospital Board is to set up clinics at hospitals to deal with cases needing long term psychiatric treatment. On the question of convalescent treatment the view of the Regional Hospital Board is that responsibility can be accepted only in those cases where the consultant had recommended the case as requiring some definite medical or nursing treatment. The provision of convalescence for those children who required just a change of air and rest in good healthy surroundings could not be accepted and would still remain the responsibility of the Local Education Authority.

From the appointed day the Local Education Authority has been relieved of the cost of treatment of school children at hospitals which is now borne by the Regional Hospital Board. The Board has, however, no power to provide education in hospitals for children. The provision of education in hospitals for children who are likely to be in-patients for a long period is the responsibility of the Local Education Authority. As from the 5th July, 1948, therefore, the administration of the hospital special school at Frenchay Park Sanatorium for children has been taken over by the Education Committee.

The supply of spectacles, surgical boots and appliances, etc., from 5th July, was arranged through the Local Executive Council of the National Health Service, and this has worked well though there has proved to be a considerable delay in the completion of orders, particularly for spectacles, owing to the very great demand on the Service. At the end of the year the average delay in the completion of orders for spectacles was at least three months and this period seems to be increasing. It seems very desirable that some arrangements should be made for a priority supply, particularly in those cases where the defect is a severe one.

On receipt of the Ministry of Education Administrative Memorandum No. 303 on the Ophthalmic Services, a further discussion took place with the Regional Hospital Board at which Mr. Garden, the Authority's Ophthalmic Adviser, was present. The suggestions contained in the Memorandum were discussed, and it was decided to proceed with arrangements for taking the ophthalmic services of the Authority within the hospital and specialist services provided by the Regional Hospital Board. This change, however, had not taken place up to the end of the year. The difficulties met with in some areas did not, however, apply so markedly in Bristol as the Regional Hospital Board had already accepted responsibility for payment on a sessional basis for the full and part-time ophthalmic specialists previously employed by the Authority and the question of payment on a case basis did not therefore arise.

MEDICAL INSPECTION

A complete medical inspection was made during the year of 16,296 children attending the Committee's primary and secondary schools. The tables relating to these examinations will be found in the statistical section at the end of this report.

NURSES' INSPECTIONS AND UNCLEANLINESS

The number of visits to schools made by the nursing staff during the year for the purpose of examining children at survey visits and cleanliness inspections was 3,080 compared with 2,497 in 1947, 147,853 examinations (including 1,661 re-examinations) having been made. The number of individual children found with verminous conditions during the year was 3,399. The treatment and cleansing of children found to have varying degrees of verminous conditions or infestation was continued in all the clinics during the year, 1,643 individual children being treated and 7,039 attendances being made. Treatment by a D.D.T. Emulsion or a Lethane preparation was given as in previous years. The figures would appear to show some improvement as compared with last year and the Clinic Sisters report that better co-operation has been shown by parents in the cleansing of their children. There are still, however, a number of families where the children have constantly to be kept under observation because of re-infestation, probably from older members of the family.

The close co-operation between the nurses and the Heads of schools was maintained during the year and the valuable assistance given by teachers and the staff of the Child Welfare Department in dealing with this problem is greatly appreciated.

Home Visiting.

During the year the number of visits for the purpose of "following up" defects, etc., was 2,176. Other visits in regard to uncleanness, etc., totalled 1,618.

TREATMENT

The total number of attendances at the clinics during the year was 283,516.

Skin Clinics.

Scalp Ringworm.

50 Cases of scalp ringworm were dealt with during the year 13 by X-Ray—
37 otherwise.

The cases treated by X-Rays in 1948 and the two preceding years are as follows :—

	1946	1947	1948
Primary and Secondary Schools ..	3	5	9
Nursery Schools	7	6	4
Total ..	10	11	13

X-Ray Treatment of Ringworm.

Dr. F. Gower Bergin relinquished his appointment as Radiologist in charge of this department on 5th July, 1948, and since that date this treatment has been undertaken by the Radiological Department of the Bristol Royal Hospital. 5 cases were dealt with at the Central Health Clinic before 5th July, and 4 cases at the Hospital during the remainder of the year.

Dr. J. Raban, M.R.C.S., L.R.C.P., D.M.R., the Radiotherapist of the Hospital reports as follows :—

"The five field technique has been used throughout. A special appliance was constructed in the Hospital workshop to attain precision of distance and alignment.

The dose of X-rays administered to achieve epilation in 16-20 days has been measured in the physical unit to avoid individual discrepancy that may arise in pastille colourimetric method.

The supervision of each case is continued until determined free of infection by Wood's Light—a period of from 4-6 weeks after treatment. The patient is then discharged and the School Medical Officer is informed so that the child may return to school and continue to be kept under observation at the school.

The co-operation of the Hospital's Consultant Dermatologist has been readily available in all cases presenting any abnormality."

Body Ringworm.

During 1948, 222 cases of this disease amongst school children were treated at the school clinics. This compares with 256 cases in 1947 and 234 in 1946.

Impetigo.

The school clinics treated 681 cases of impetigo during the year.

Scabies.

The following table shows the number of scabies cases treated in 1948 and the three preceding years.

Year	School Cases	Cases under school age	Adults	
			Women	Men
1945	1,520	555	1,354	537
1946	1,312	460	1,103	747
1947	789	305	621	420
1948	462	148	292	191

The decline in the incidence of cases of scabies which has been apparent for the last three or four years continued during 1948, 476 school cases being dealt with as compared with 789 in 1947. As in previous years treatment with Benzyl Benzoate Solution or Sulphur Cream was given and the routine dis-infestation of the patients' personal clothing and bedding has been carried out as before.

Eye Clinics.

Mr. R. R. Garden, M.B., Ch.B., D.O.M.S., D.P.H., the Committee's Ophthalmic Surgeon, reports as follows:—

"During 1948, a total of 4,165 school refraction cases attended the clinics, including 4,118 from primary and secondary, 31 from nursery schools and 16 from special schools. Spectacles were not prescribed for 690 of the new cases, but a number of these children will attend for periodical observation.

On 5th July, the National Health Service Act came into force, and responsibility for the ophthalmic care of school children was transferred to the South Western Regional Hospital Board. In practice, the work was carried on as before, at the same clinics and by the same staff, but one unfortunate (and it is to be hoped temporary) effect was a great delay in the supply of spectacles. As is well known, the demand for ophthalmic services and appliances throughout the population exceeded all expectations, and children now have to take their turn for glasses with the others. This could be a serious matter, especially for young people with squint and eye-strain, and it is expected that an arrangement will be made soon to give priority on medical grounds for such cases.

The number of sessions given to refraction work during the year was 501; spectacles were prescribed in 1,938 cases and were actually supplied to 1,451 children by the end of the year.

The number of attendances at clinics for the treatment of external eye diseases during 1948 was 6,478.

New squint cases numbering 276 and 888 from previous sessions (kept under observation or treatment), attended during the year. Of the new patients 112 were referred by the Maternity and Child Welfare Department and 17 attended from nursery schools.

Owing to lack of staff, less orthoptic work was done for Education Committee cases at the Eye Hospital during the year, but it is probable that improved facilities will be available in the near future. The following table gives the figures for 1948.

Total number of cases examined for the first time	9
Number receiving treatment twice weekly at the end of the year	33
Total number of attendances during the year	81

Altogether, 69 operations for the correction of squint and other eye defects were carried out during the year at the Bristol Eye Hospital, and in connection with these the orthoptic department carried out all the pre- and post-operative work which is so useful in cases of this kind."

Defects of Nose and Throat.

The number of children found suffering from the above ailments was 2,774 of whom 513 (including 10 Nursery School children) received non-operative treatment at the Committee's clinics. Operative treatment for enlarged tonsils and adenoids at the various Bristol hospitals was given in 1,530 cases.

Aural Clinics.

Mr. Gordon R. Scarff, M.B., Ch.B., F.R.C.S. (Ed.), the Aural Surgeon reports as follows :—

“ During the past year unification of the Ear, Nose and Throat work of the Hospitals with that of the City Health Services has become effective so that cases seen at the Clinic requiring operative treatment have been entered directly on the waiting list of the Hospital of the parents' choice. This has led to a considerable saving of time on the part of both parents and consultants.

Under these revised arrangements the Clinic work has been divided between the two Ear, Nose and Throat teams at the Royal Hospital, Mr. Watson Williams being the senior surgeon of the other team.

During the year the number of children suffering from aural defects attending the Clinic was 369 (including 40 pre-school cases and 10 nursery school cases). Of these, 196 were suffering from middle ear suppuration, i.e., cases which had failed to clear up with a few weeks' routine treatment, out of a total of 658 new cases found at school medical inspection. Only 40 of these cases were still attending at the end of the year.

Routine treatment has been carried out on the same lines as before, except for zinc ionisation which has been given up as a form of treatment, as it has been found that the results have been so little superior to the dry aural treatment that it was not considered worth while to second a nurse for this duty.

There were 1,497 children including 156 nursery school children and 127 infants from the maternity child welfare department referred for diagnosis of nose and throat conditions. Of these, 830 were advised operative treatment for infected tonsils and adenoids and 125 advised operative treatment for other ear, nose and throat conditions.”

Child Guidance Clinic.

Dr. R. F. Barbour, M.A., F.R.C.P., D.P.M., the Director, reports as follows :—

“ The Bristol Child Guidance Clinic opened originally in 1936, in Argyle Road. By 1939 the accommodation was inadequate, being later rendered more so by blitzing. The clinic was moved in June, 1945, to 'temporary' quarters in Cotham, but we had to wait for new premises for some time and it was only in April, 1948, that the clinic was transferred to its present address—7 Brunswick Square.

Here, on the ground floor, there is an office and waiting room, and also the caretaker's flat. On the first floor are Director's, Doctors' rooms, offices for two psychiatric social workers, and a large playroom. On the second floor are four rooms for psychologists, and on the third floor are additional rooms, one of which is planned as a library and students' room. Psychiatric work requires space, privacy and tranquillity and the new clinic provides the staff with adequate accommodation.

There have been several changes of staff during the year. Mrs. Adolphine Singer, Ph.D. accepted the appointment of clinical psychologist at the Berkshire Child Guidance Clinic and resigned in November, 1948, and was succeeded by Miss Ann Hepburn, M.A., who came on to the staff in February, 1949. A third psychologist, Mr. Ronald Good, B.A., was appointed in August, 1948. Miss Priscilla Piercy followed Mrs. Leslie Sambrook as psychiatric social worker, the latter having taken up work at the Maidstone Child Guidance Clinic.

Pre-war one could count on extra voluntary help in all departments, but this is no longer the case to-day. During the last twelve months, however, we have had valuable assistance from Dr. Hilda Oldham, psychologist, and Mrs. E. K. Shannon, social worker. On the medical side, Dr. Stewart and Dr. Maggs worked at the clinic for several months.

This last year has been a difficult one for Child Guidance Clinics throughout the country. There have been administrative problems, in part due to the introduction of the National Health Service. Bristol has decided to keep its team intact and not to differentiate the clinical from the Child Guidance Service. Then there is the serious shortage of trained staff, particularly of psychiatric social workers and child psychiatrists. Finally, one must emphasize how the present housing difficulties aggravate many problems; not a few maladjusted children who might settle down given reasonable freedom and opportunities in their own homes are found to be too disturbing when there are three generations tightly fitted into one house and, as a result, alternative placements have to be found for them.

During the year, 381 cases were registered (256 boys and 125 girls). Since the clinic opened 4,410 cases have been registered.

Psychiatric.

Diagnostic Interviews	..	..	..	..	329
Physical Exam.	..	..	..	..	346
Treatment	..	..	..	..	654
Parents	..	..	..	..	30
Others	..	..	..	..	12
Lectures	..	..	..	..	4

Psychological.

Examinations (including Juvenile Court cases)	..	508
Treatments	..	319
Parents	..	11
Others	..	2
Other Visits	..	4

Social.

Treatment of Children	..	510
Interviews with Parents	..	1,154
Home Visits	..	143
Other Visits	..	13
Lectures	..	5

The Psychologists work approximately half time at the clinic and half time in the schools. They carried out about 350 examinations on school premises.

The term "Sources of Referral" may be misleading as, in many cases, formally referred, say, by the School Medical Department, the original remark or complaint that prompted the referral may have been made by the parent or teacher. The fact that parents can refer cases direct to the clinic is a valued method of referral and seldom, if ever, abused.

Analysis of Sources of Referral of 359 Cases, 1947-48.

School Medical Department	..	111
Head Teachers	..	42
Education Department	..	37
Juvenile Court	..	86
Parents	..	46
General Practitioners	..	18
Hospitals	..	17
Other Agencies	..	12

The Clinic staff during the year have been particularly conscious of the children with more than one disability, children where the enlarged team have to consult together so as to decide what will be the best form of education to meet the child's various needs.

An example of this type of case is the following :—

Boy aged 7½ years at the Deaf School but not progressing. Referred with the query 'Is he a true aphasic?'. No history of birth injury but slow in his milestones. I.Q. 90 on Performance Tests. It was observed that he had an awkward gait, but the neurologist was unable to find any organic cause. At the Clinic it was noted that he was left-handed and right-eyed. The mother made it clear that both she and the child had many emotional problems during the first two years of life. A hasty marriage was followed by the mother being turned out of the house by the mother-in-law, and at that time she found the boy a very great nuisance, "hardened" as she put it. The diagnosis of deafness was made at the age of 2½ years following a discharge from the ears. This made the mother more sympathetic to the child, but there were still obviously many emotional problems.

It is only the multilateral approach which enables one to differentiate the various causes of the present lack of progress.

The electro-encephalogram is a valued diagnostic aid and often will help to clarify a doubtful case, as will be seen from the following case history.

Boy aged 13, referred by School Medical Officer on account of enuresis and headaches. Father died in 1943. Mother nervy, possessive. Boy the youngest of four children. Caesarean birth, not weaned until eighteen months. Enuresis, according to mother, dates from blitz. Headaches are always much worse after a wet bed. The electro-encephalogram showed abnormal findings, and when the boy was placed on benzedrine both headaches and bed-wetting improved.

Enuresis, like stammering is possibly more inconvenient than serious, though the extra work irritates many mothers, and the habit may well interfere with the family's holiday plans and frequently makes the individual himself very self-conscious. A special clinic entirely devoted to enuretics was commenced as an experiment with the assistance of Dr. Smallwood, the Chief Assistant School Medical Officer. All the cases were

chronics and many of the parents had adopted a fatalistic attitude about the problem and were more than pleased to find that something could be done for their children. A gratifying number of cases have responded to a "mass attack" in which group therapy, medication, and star charts have all been used.

As in previous years, almost all indictable cases from the Juvenile Court have been referred for psychological examination and, where necessary, for examination by the psychiatrist. A number are taken on for treatment but the majority of cases are seen for consultation only.

Girl aged 8½ years referred on account of stealing. Mother at work; found to have no real interest in her children. Had previously taken the eldest boy to the Police Court when he stole. Did the same thing with the girl and was surprised to find that "treatment" of both herself and the child was advised. The girl was of normal intelligence, backward at school, of hysterical character with considerable underlying aggression. Her demands for affection not being met at home, she turned to other less desirable methods of obtaining attention.

When a clinic has been open for a good few years one learns not only of problem children but of problem families, but certain cases may recur.

A boy aged 14 was referred on account of enuresis. The case had come to the clinic ten years previously for the same problem. The mother was considered anxious, fussy and aggressive. The child's drawings showed preoccupation with cleanliness. He was of normal intelligence. After seven attendances the case was withdrawn by the parents as there had been no improvement. When the case was again referred, difficulties were put into the mother's way and, only when the staff were convinced of her real desire to co-operate, was the case taken on. The first step was that the psychiatric social worker convinced the mother that a changed attitude was necessary. The boy promptly reacted by being more aggressive, but this time the mother could "take it". Differential treatment of the boy and his younger brother was discussed, and with this further step the boy responded with friendliness and co-operation. Where, previously, he had been disinterested in the problem, sullen and almost depressed over it, he now became really co-operative, and the result was that he soon became dry.

Several cases have been seen where bed-wetting or soiling alternated with aggressive behaviour. In one case the mother frankly said that she preferred to wash the clothes rather than have a noisy and turbulent boy in the house. This stage would have to be worked through if the boy was going to establish both cleanliness and self-confidence.

The Clinic tends more and more to be used as an Instructional Centre. Post Graduates taking the Diplomas in Child Health, Psychological Medicine and Public Health, attend the Clinic regularly. A visit to the Clinic is a recognized part of the Courses for Health Visitors, District Nurses, Froebel Students and Social Science Students at the University.

The staff of the Clinic take part each year in the recognized Lecture Courses for many of the above and, in addition, each member of the staff takes one or more courses under the auspices of either the W.E.A. or the Extra Mural Department of the University."

Dental Clinics.

Mr. W. H. B. Stride, L.D.S., Senior Dental Officer, reports as follows :—

"It is very gratifying to be able to report that the dental staff which had fallen to nine at the end of last year was increased to ten by the appointment of Mr. G. Davis on the 1st March, 1948. The staff was maintained at full strength throughout the rest of the year. In view of the difficulty of staffing in the School Dental Service at the present time, this is a matter of great satisfaction.

In addition, owing to the offer of full time work for a few weeks by Mr. R. Ferguson, it was possible to make use of the Verrier Road Clinic for some school sessions in December.

The number of children inspected during the year was 41,940, the number treated has increased to 25,851 as compared with 24,243 last year, and there is an increase of 200 in the number of children seen as compared with 1947. In addition 1,559 children attending nursery schools and classes were inspected and treated during the year.

At least five sessions a week are given to the treatment of hospital and institution cases and an increase of 47 over last year in the number of sessions given to Maternity and Child Welfare work, which totalled 465, shows that the steady increase is being maintained year by year in this part of the work.

Particulars of cases and attendances of mothers and young children during the year are as follows :—

		Mothers		Pre-School Children
		Ante-natal	Post-natal	
New cases	.. ..	1,408	124	1,284
Attendances	.. ..	3,547	420	2,545

The school population has now risen to 52,561, and it is hoped that it will be possible to add to the present staff so that all the needs of the children of the City can adequately be met. The full co-operation of the parents is shown by the steady rise in the consent rate for treatment of school children, which is now 78% and this, with the rising demand for treatment of mothers and young children, provides more work than the present staff can fairly deal with.

One of the difficulties that is occurring at present is caused by the tendency on the part of the parents to come along and ask for immediate treatment when a child complains or if they themselves notice, for the first time, something unusual with the child's teeth. All cases of acute pain are dealt with at once, if at all possible, even in cases where parents have refused their consent at the school inspection, but on occasion children are brought for less important matters and a number of such cases on any one day seriously interferes with the appointment system.

The arrangements commenced in October, 1947, whereby a number of children received treatment at the Department of Children's Dentistry of the Bristol Dental Hospital were continued during the year. The figures relating to the children dealt with during 1948 are as follows :—

UNIVERSITY OF BRISTOL

Department of Children's Dentistry, Bristol Dental Hospital.

Number of cases inspected	482
Number needing treatment	342
Number of new cases treated	264
Others treated	277
Total attendances	549

Orthodontic Treatment.

Since the 5th July, 1948, the treatment of all orthodontic cases has been undertaken by the Bristol Dental Hospital. A full time orthodontist has been appointed by the Hospital and attends a diagnostic session held at the Central Health Clinic each week. Cases needing fixed or removable appliances are referred to the Dental Hospital for treatment. This diagnostic session is proving itself of the greatest value, as in so many cases it is necessary to refer patients for advice at an early stage when the tendency to abnormality is first noted. This is a valuable part of preventive medicine and the excellent attendances show the appreciation of the parents. The waiting list, which twelve months ago was over 500, is now less than a quarter of that number.

Details of the cases seen at the diagnostic clinic are as follows :—

Orthodontic Diagnostic Clinic.

Number of New Patients seen	483
Number of Attendances	1,190
Number of Cases referred to Dental Hospital ..	412
Number of Cases completed	127

Mr. Trevor Johnson, L.D.S., reports :—

"Altogether 257 new cases were seen for treatment by appliances at the Dental Hospital during the year, and the introduction of a full-time orthodontist has resulted in all but the most recently referred cases being already under treatment. A high standard of treatment is being provided, and the attendances are on the whole very good. Very few cases discontinue treatment when once this has been commenced."

Orthopaedic and Postural Defects.

Mr. A. L. Eyre-Brook, M.S., F.R.C.S., reports as follows :—

"Though the financial responsibility of this service from 5th July, 1948, has been accepted by the Regional Hospital Board, the clinic continues to function at the Central Health Clinic as before.

During the year arrangements have been made for the services of the two physiotherapists at the Orthopaedic Clinic to be interchangeable with those of the physiotherapists employed in the Artificial Sunlight Department. This arrangement provides a greater variety of duties and experience for these officers."

The following Table shows the various ailments found amongst the patients seen during the year :—

	Age 5 yrs. and over	Age under five yrs.
Paralysis (a) Flaccid	40	10
(b) Spastic	57	15
Tuberculosis of Bones and Joints ..	9	—
Congenital abnormalities of Bones and Joints	60	17
Amputations	8	2
Rickets	3	6
Genu Valgum	61	61
Various (flat foot, spinal curvature, etc.)	907	183
	<hr/> 1,145 <hr/>	<hr/> 294 <hr/>

Chiropody Clinic.

Mr. L. Tasker, the Committee's Chiropodist reports :—

“ There was a considerable increase in the number of attendances in 1948—the figures being 4,206 treatments (882 new cases) against 2,939 (675 new cases) in 1947.

Of the new cases, 717 were from Primary Schools, 165 from Modern Secondary and Grammar Schools and 19 from the M. & C.W. Depts.

The largest classification was Plantar Warts with 653 new cases which represents an increase of 144 over the previous year. Other groups remain fairly constant from year to year. One hopeful sign is the decrease in the number of multiple lesions found recently and this is no doubt due to greater care in the examination of the feet in the schools.

During the year, some 20 cases were referred to the Orthopaedic Department for operation or physio-therapy.”

The following is a summary of treatments :—

	Primary Schools		Secondary and Grammar Schools	
	1st	Other	1st	Other
Hammer toes	15	65	4	16
Metatarsalgia	7	8	1	4
Plantar Warts	529	2,498	124	523
Pes Cavus	1	—	1	1
Foot strains	29	38	5	13
Hallux Valgus and Rigidus	9	5	5	7
Miscellaneous	127	82	25	26
	<hr/> 717 <hr/>	<hr/> 2,696 <hr/>	<hr/> 165 <hr/>	<hr/> 590 <hr/>

Cardio-Rheumatic Clinic.

Professor C. Bruce Perry, M.D., Ch.B., F.R.C.P., reports :—

There is no change to report in the organisation of the Clinic this year. The total number of attendances shows a slight increase but there was a decrease in the number of new cases of rheumatic heart disease seen. On the other hand there was an increase in the number of acute cases requiring hospital treatment. It would appear that at the moment the incidence of acute rheumatism has reached a level which may be regarded as “normal” for the time being.

The investigation into the nature and significance of “growing pains” continues but sufficient numbers have not yet been examined to warrant any definite conclusions.

The compulsory notification of acute rheumatism which came into operation in Bristol on October 1st, 1947, has provided much interesting information about the milder cases of acute rheumatism and is also teaching us about the difficulties that may occur in the diagnosis of acute rheumatism.

Summary of cases attending CARDIO-RHEUMATIC CLINIC, 1948, including Primary, Secondary, Grammar and Nursery Schools.

	No treatment or restriction	No treatment but restriction of games, etc.	Treatment and school	Treatment and exclude from school	Institutional treatment	TOTAL
NEW CASES.						
Rheumatic Heart Disease ..	5	2	—	—	18	25
Chorea ..	2	—	—	1	10	13
No Organic Disease ..	126	1	—	2	1	130
Congenital Heart Disease ..	9	1	—	1	—	11
Various ..	4	—	—	2	9	15
	146	4	—	6	38	194
RE-EXAMINATIONS.						
Rheumatic Heart Disease ..	321	67	5	9	16	418
Chorea ..	48	—	—	—	4	52
No Organic Disease ..	297	1	1	1	—	300
Congenital Heart Disease ..	86	11	1	5	1	104
Various ..	88	1	—	1	1	91
	840	80	7	16	22	965

No. of Individual children examined	..	..	656
No. of New cases for 1948	..	..	194
No. of Re-examinations	..	..	965
TOTAL NUMBER OF ATTENDANCES	..	..	1,159

Asthma Clinic.

Dr. R. Irving Bell, M.R.C.S., L.R.C.P., D.P.H. reports :—

"Asthma and hay fever cases continue to be seen on Wednesday afternoons at the Central Clinic as described in the report for 1947.

In addition to children referred by members of the School Medical Staff, a number were sent in by general practitioners. After July 5th, 1948, a certain amount of overlapping in treatment arose and this continues. Some children, who had been receiving treatment from a hospital and their own doctor alternately, attended for further examination and treatment at the clinic. Such confusion of treatments is hardly conducive to a steady recovery and complicates observation and attendance at school.

Again, as in previous years a number of children with long standing asthma, were referred to Miss Wilson for breathing and relaxation therapy as this treatment has been found to succeed where others fail.

As reported for the year 1947, children with typical hay fever attacks were not skin tested, and no desensitising injections were given—all children so afflicted were successfully treated with anti-histamine compounds chiefly 'Benedryl' and 'Antistin.' In future a similar compound 'Anthisan' will be given a trial."

Chest Clinic.

Dr. C. J. Campbell Faill, F.R.C.P.(E.), who is in charge of the Chest Clinic reports as follows :—

"Since the introduction of the National Health Service Act on 5th July, 1948, the work of the Chest Clinic has been taken over by the South Western Regional Hospital Board. The Clinic, however, continues to be held at the Central Health Clinic and there has been no change in the arrangements for examining school children.

The Frenchay Orthopaedic Hospital and Sanatorium for children has similarly come within the hospital services of the South Western Regional Hospital Board. There appears to be some doubt as to whether this hospital will continue as a sanatorium for children, and discussions as to its future have been held, but no decision has yet been made by the Regional Hospital Board as to the future arrangements for the accommodation of children needing sanatorium treatment. Meanwhile, only a very small number of children are being accepted for admission which means that a long waiting list is being built up.

During the year 794 school patients were examined, of whom 460 were new and 334 old. Of the former, 35 were classified as definite pulmonary tuberculosis, 11 non-pulmonary and 414 as non-tubercular."

Mass Radiography.

Dr. E. E. Mawson, M.D., Ch.B. reports :—

"From 5th July, 1948, the mass radiography service of the Local Authority was transferred to the South Western Regional Hospital Board. During the year, 2,955 children due to leave school during the year attended for mass radiography. The details of the cases are given below."

<i>Summary</i>	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
Miniature Films	1,322	1,633	2,955
Recalled for large films	37	43	80
Normal large films	23	21	44
Did not attend	2	—	2
Significant cases	12	22	34

Analysis of Significant Cases.

Of the significant cases 22 were found on clinical examination to have non-tuberculous conditions as set out below.

	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
Abnormality bony thorax ..	3	12	15
Bronchitis and Emphysema ..	2	—	2
Pneumonia	—	1	1
Pleural thickening	1	—	1
Bronchiectasis	1	1	2
Acquired Cardiac condition ..	1	—	1
Total	8	14	22

The remaining 12 cases were found to have varying degrees of tuberculous conditions and were dealt with as follows :—

	Boys	Girls	Total	Disposal			
				N.A.	Dr.	Disp.	San.
<i>Active</i>							
Post-primary unilateral							
With symptoms	1	2	3	—	—	1	2
Without symptoms ..	1	—	1	—	—	—	1
Post-primary bilateral							
With symptoms	—	1	1	—	—	1	—
Without symptoms ..	—	—	—	—	—	—	—
<i>Inactive</i>							
Inactive Primary Lesion ..	2	2	4	4	—	—	—
Inactive Post Primary ..	—	1	1	—	—	1	—
Tuberculous pleural effusion	—	2	2	1	1	—	—
Total	4	8	12	5	1	3	3

N.A.—No Action.

Dr.—Patient's Doctor.

Disp.—Dispensary observation.

San.—Sanatorium.

Artificial Sunlight Clinic.

During 1948, 329 children of school age and 52 children at nursery schools were given a complete course of artificial sunlight treatment. Details of the cases are given below :—

Defect	Prim., Secy. and Gram. Schools			Nursery Schools		
	No. Treated	Improved	Stationary	No. Treated	Improved	Stationary
General Debility	163	121	42	27	22	5
Bronchitis-mod.	19	15	4	1	1	—
„ -slight	11	9	2	2	2	—
Enlarged glands	16	14	2	—	—	—
Malnutrition	7	4	3	4	3	1
Miscellaneous	113	92	21	18	15	3
Total	329	255	74	52	43	9

Speech Clinics.

Miss W. Cooke, M.S.S.T., reports :—

Northern Area.

During her ten months of service in 1948 Miss Wilson dealt with 55 children (18 new and 37 old cases).

Southern Area (and all areas from 1st November).

Statistics for the year are as follows :—

- (a) Children already in attendance on 1st January, 1948 .. 69
- (b) Admitted during 1948 31
- (c) Total number of cases in attendance during the year .. 100
- (d) Discharged during 1948 42
- (e) The types of cases were as follows :
 - (i) Stammering 39
 - (ii) Stammering with speech defect .. 3
 - (iii) Speech defect only 58

100

(g) The defects of these cases were as follows :—

Stammering	39
Stammer and speech defect	3
Dyslalia	23
Excessive nasality (2 partially paralysed palates, 6 cleft palates)	8
Dysphasia	3
Mental retardation	4
Lisping (1 guttural, 1 nasal, 1 "TH" type 4 lateral (or "Welsh ll") type	7
Retarded speech development	2
Dysarthria (due to organic defect, or malfunctioning)	4
Idioglossia	3
Partial deafness	2

100

General Remarks.

Closer co-ordination is desirable between the Speech Therapy Department and the local Hospitals. Frequently the therapist is hampered in her efforts to assess the general situation by inability to obtain adequate reports from the Specialists concerned.

The waiting list for children needing operative treatment continues to increase. In many cases little hope of satisfactory results through speech therapy can be obtained until increased facilities are available for plastic surgery. It is also emphasized that the neurological element in certain types of defects or disorders of speech renders it advisable for the services of a neurologist to be available when necessary.

Partially deaf children attending the speech therapist are still unable to take full advantage of the treatment, owing to the lack of specialised training for their disability.

Miss Cooke has dealt with all children attending the Speech Therapy Clinic since the resignation of Miss Wilson at the end of October, the work being mainly centred at Argyle Road Clinic. It is hoped, shortly to replace Miss Wilson by the appointment of a full time speech therapist. Even with this addition however, the staff will be quite inadequate to afford a complete service for the children of the city.

The following cases may be of interest in illustrating how certain children have achieved normal speech after previous total unintelligibility :—

Case 1. P.G. suffered from polioencephalitis at 1 year of age and this was followed by epilepsy at 2 years 4 months. He was unable to attend school until nearly 9 years of age at which time he was unintelligible, using neither tongue, lips nor other organs of articulation. Less than a year later he was talking distinctly although paragrammaticism was present. The latter disability has since been overcome and he now speaks normally. Needless to say his mother worked indefatigably with him in conjunction with the speech therapist, and his teacher was most helpful in giving him individual attention with reading and other school work.

Case 2. H.D. a case of double cleft palate, with unilateral harelip was quite unintelligible on entering his Bristol school at the age of 8½ years. His teacher was unable to understand him, and he was too sensitive to show his innate mental capacity. He was therefore placed in a class for backward boys. At that time he commenced systematic speech therapy and within five terms he had advanced four classes and gained a prize as "top boy" of his class.

Case 3. Is one of the numerous examples of the self-confidence obtained through speech therapy: T.E. was a severe stammerer at 9 years and a highly sensitive only child. His position in class was 17th. After one term's attendance at the Clinic he proudly showed the speech therapist proof of his true ability, i.e., a book prize awarded for the boy gaining highest marks in the class.

Case 4. R.J. suffering from cerebral palsy, achieved intelligibility after 26 clinic attendances. Although extremely intelligent he had previously been unable to make himself understood. His confidence and sense of well-being improved with his speech as is invariably the case. Again the wholehearted co-operation of parent and teacher was an essential part of the success attained.

Case 5. D.S. then aged 8 was a case of multiple defect, i.e. slight whole tone deafness coupled with dysphasia and a short frenum. He refused to attempt speech when first at school and if forced to do so burst into tears. His teacher stated "David is aggressive, unfriendly and inclined to be sullen". Some time later he was jokingly introduced by one member of the school health staff to another as a Polish refugee and his unintelligibility was such that the statement was taken seriously! After two years speech therapy his speech was almost normal, with the exception of one or two isolated speech sounds. He is now 12 years of age and no one would guess that he had once been in need of attendance at a speech clinic. He is bright, cheerful, continuously smiling and a playground leader of no mean worth.

Dr. R. J. Irving Bell, M.R.C.S., L.R.C.P., D.P.H., reports :—

“A weekly session is held at the Central Clinic at which cases of speech defects sent in by teachers, medical officers and parents are examined to eliminate any physical defects which might be the cause of the speech disorder or defect. Those requiring the attention of the E.N.T. or other specialist are referred for treatment before any speech therapy is undertaken.

I was impressed by the number of children, referred by teachers and medical officers, who displayed very slight speech defects and disorders and a large proportion of these were very young children, many in fact attending nursery schools. Although early correction of speech disorders is advisable, it seems doubtful whether children aged 3 to 5 can be sufficiently co-operative in treatment to give significantly good results. A period of a few months at school is generally allowed to pass before re-examination and commencement of speech therapy if then needed.”

SPECIAL SCHOOLS

Schools for Educationally Sub-normal Children.

Dr. R. J. Irving Bell, M.R.C.S., L.R.C.P., D.P.H., reports :—

Day Special Schools.

“The three Day Special Schools—Rose Green for Senior Girls (100), Russell Town for Senior Boys (100) and Newfoundland Road for Junior Mixed (80) continued at full capacity during the year. There is a heavy waiting list for these schools especially for the Senior Boys’ School. It is hoped to increase the accommodation at this School to 140 early in 1949.

Residential Special Schools.

The long-awaited move of the Senior Boys’ Residential Special School from The Cedars, Purton, to Kingsdon Manor, near Ilchester, was carried out during May, 1948. Conditions generally are much better in this new school and when certain additional washing and sanitary facilities, etc. have been completed, it will be possible to increase the accommodation to take 40 boys in residence.

As I mentioned in last year’s report, there is an increasing need for residential provision for these cases preferably in schools in the immediate neighbourhood of Bristol.

The practice of holding a conference attended by the many persons concerned with those boys and girls leaving the special schools was continued during the year, and it is to be hoped that this procedure, which is designed to help the leaver’s welfare and which has proved of great value, will never be dropped.”

The number of children on the registers of the special schools at the end of the years is as follows :—

	Boys	Girls	Total
Russell Town Day Special School, Bristol ..	102	—	102
Rose Green Day Special School, Bristol	—	103	103
Newfoundland Road Day Special School, Bristol ..	57	24	81
Croydon Hall Residential School, Watchet ..	—	36	36
Kingsdon Manor Residential School, Kingsdon ..	27	—	27

As from April, 1948, Croydon Hall Residential Special School was altered from a junior school to a school for all senior girls.

OPEN AIR SCHOOLS

Dr. B. J. Boulton, M.B., Ch.B., the Medical Officer of the Open Air Schools reports

New Place Residential Open Air School, Porlock.

“The School has been fully utilised during the year. In the majority of cases, the period of stay at the school has been limited to two terms, and a larger number of delicate children have been able to benefit from the advantages offered than was the case a few years ago.

Unfortunately, the coming summer term will be our last at New Place as the school closes at the end of September, 1949, when the lease expires. There appears to be a reasonable prospect of other suitable premises being secured, either in the Porlock district, or elsewhere and in time to prevent any long break in this special educational work.

The new Residential Open Air School, wherever it may be situated, should eventually provide accommodation for at least 60 pupils and it is hoped that in addition to the type of case at present catered for, places will also be found for children needing short term treatment for a period of four to six weeks.”



Learning the difference between similar sounds (T & K) with the help of "Timmer" the Kitten



Boys with cleft palate or partially paralysed palates learning breath direction through play



A cleft palate case learns to direct the breath through the mouth instead of through the nose
(as previously)

The number of children on the registers at the end of the year is as follows :—

	Boys	Girls	Total
New Place, Porlock :			
Debilitated children	23	19	42
Physically defective children	—	—	—

South Bristol Day Open Air School, Novers' Hill.

Delicate Children.

"This side of the school has been full during the year, and although the average period of stay is less than it was a few years ago, there is still a long waiting list.

As might be expected, a number of the pupils admitted are found to be educationally retarded, due very often, to late entry to school and irregular attendance caused by ill-health. Some of these children will need special educational treatment when they are discharged from the Open Air School and it is much to their advantage if arrangements for the transfer from one school to another can be made well in advance.

Physically-handicapped children.

There has been a marked falling off in the applications for the admission of physically handicapped children during the last twelve months, and no suitable case has had to wait for a vacancy to occur. It is possible that more children suffering from the lesser degrees of physical handicap attend the ordinary school than was the case formerly.

For some years the problem of the education of severely handicapped children has caused concern both to the Education Authority, and to other interested bodies in the City such as the Bristol Crippled Children's Society. During the last twelve months selected children of this type have been able to receive some education in their own homes from a teacher on the staff of the Open Air School specially appointed to do this work. The time that can be given to each child, however, is somewhat limited and whenever the disability is not too severe to prevent the child travelling by the special transport provided, the case is admitted into the school when it is otherwise suitable. As a result of this policy there are a number of physically disabled children who are unsteady on their feet and the spontaneous desire of these children to help each other is soon apparent to the observer. However keen the supervision, occasional falls and minor injuries appear to be inevitable, but in the attempt to reduce these to a minimum an extra guide has been engaged to escort these children from one part of the school to another. There is, of course, a full time nurse at the school.

General Remarks.

The long overdue work on the grounds, lawns, drives, etc. has been carried out during the year in parts of the premises, and has resulted in a very pleasing improvement in the general appearance of the place."

The number of children on the registers at the end of the year is as follows :—

	Boys	Girls	Total
Novers Open Air School :			
Debilitated children	30	30	60
Physically-defective children	18	18	36

Peripatetic Teacher.

Mr. L. Bone, the Head of Novers Day Open Air School, reports :—

"In order to provide some education for severely handicapped children who were unable to attend school and for children who on medical grounds were excluded from school for a long period, arrangements were made for lessons to be given at home by a visiting teacher. This scheme commenced immediately after the Summer holiday, 1948. A widely experienced teacher who possesses a car was asked to undertake the work of giving educational instruction to these children, and in the first place the names of fourteen children who, for reasons of physical disability were unable to attend any school, were supplied by the School Health Service. By the end of 1948 the number of children had increased to 21 and in these first four months the visiting teacher had made a total of 288 visits to the homes.

It is found that the great majority of parents are very co-operative while the children look forward to each visit of the teacher. In view of the wide dispersal of the homes throughout the City, it is not possible at present for the teacher to visit each child more than twice per week, but it is hoped that additional help will be forthcoming in the near future and this will enable more frequent visits to be made.

The scheme is under the general supervision of the Headmaster of the South Bristol Open Air School, who is himself visiting the homes as opportunity offers. The visiting teacher is attached to the staff of this school.

Schools for Deaf and Partially-sighted Children.

The numbers of children on the registers at the end of the year at the day schools for Deaf and Partially-sighted Children are as follows :—

	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
Partially-deaf children	3	1	4
Deaf children (including 2 children from other authorities)	22	25	57
Partially-sighted children	19	13	32

In addition, the following handicapped children were being maintained in various special schools on 31st December, 1948 :—

Epileptic Children.

	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
Chalfont Epileptic Colony, Bucks	—	1	1
Lingfield Epileptic Colony, Surrey	2	—	2
St. Elizabeth's R.C. School, Much Hadham, Herts... ..	1	—	1

Educationally Sub-normal Children.

Allerton Priory R.C. Residential School, Liverpool	—	2	2
Besford Court R.C. Residential School, Worcester	14	—	14
Moneyhull Residential School, Warwickshire	1	—	1
Sandhill Park Residential School, Dawlish ..	1	—	1
St. Christopher's Day School, Bristol ..	1	1	2

Blind and Partially-sighted Children.

Chorleywood College for the Blind, Herts. ..	—	1	1
Royal School for the Blind, Westbury, Bristol	9	4	13
West of England Institute for Partially Sighted Children, Exeter	3	3	6

Deaf Children.

Hamilton Lodge School for Deaf Children, Brighton	1	—	1
St. John's Institute for Deaf Children, Boston Spa, Yorks.	2	1	3
West of England School for Deaf Children, Exeter	—	1	1

Maladjusted Children.

Halcon House Hostel, Taunton, Somerset ..	—	1	1
Hill Orchard School, Warwickshire	1	—	1
Ledston Hall Residential School, Leeds ..	—	1	1
St. Francis R.C. Residential School, Dorset ..	1	—	1

Delicate Children.

St. Patrick's Open Air School, Hayling Island	—	2	2
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Physically Handicapped Children.

Burton Hill House School, Malmesbury ..	—	2	2
St. Rose's R.C. School, Stroud	—	1	1
Stanmore Cripples College, Middlesex ..	1	—	1

Children with Speech Defects.

Moor House School, Oxted, Surrey	1	—	1
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Winford Orthopaedic Hospital was, on the introduction of the National Health Service Act on 5th July, 1948, taken over by the South Western Regional Hospital Board. This hospital takes long term orthopaedic cases and cases of rheumatism, rheumatic heart disease and chorea requiring prolonged in-patient treatment. The Local Education Authority is no longer responsible for the cost of maintenance and treatment of Bristol school children admitted to the hospital but continues to bear the cost of the education provided.

DEAF, PARTIALLY DEAF AND APHASIC CHILDREN

Dr. A. L. Smallwood, M.B., Ch.B., D.C.H., D.P.H., contributes the following report :—

There has always been special sentimental interest for the public in grossly handicapped children and, amongst these, blindness and deafness are the most dramatic, and were the subject of the earliest provision. In the country, as a whole, the educational needs of deaf children were recognized as early as 1792 by the establishment of schools run by voluntary organisations. According to the Board of Education Medical Report, the first institution was established in this year in London, for 350 inmates, and between 1792 and 1847, ten more residential schools were established which provided in all for 682 children. In 1841, the Bristol Deaf and Dumb Institute was founded for the care and training of deaf children.

The question of making some special educational provision for deaf children was considered by the Bristol School Board in 1885, a memorial being forwarded to the Privy Council on Education in February of that year urging that the School Board be empowered to contribute sums sufficient to secure the admission of deaf or blind children into special schools in those cases where the parents were not able to pay the required fees. In May, 1885, a sub-committee was appointed to report on the number of deaf and dumb children in the Borough, not under instruction and it was later reported that there were fourteen such children capable of receiving instruction besides several others who were not capable. It was decided to appoint a special teacher and to open two classes at Newfoundland Road and Windmill Hill schools for these deaf children. The class at Newfoundland Road opened in August, 1885. This class was later transferred to a room in St. Agnes Church premises. In October, 1886, the two classes were amalgamated at the St. Agnes premises and in July, 1887, the class was transferred to Castle Green School where accommodation was provided for twenty children. In 1893 (the date of the Blind and Deaf Children Act), fifteen children were in attendance.

In 1898, a residential school for deaf children was opened, at No. 10 Kingsdown Parade, by the High Sheriff, the children having been transferred a few days previously from the Castle Day Class. In that year it was reported that "The School is certified for 31 boys and girls and has been full since its opening. Five of the present inmates come from districts outside Bristol." The average attendance was 36, 31 residents and 5 day scholars, and the annual cost per head was £35 13s. 5d. There is an interesting and, to present day conceptions, somewhat amusing, resolution in the Minutes for May, 1899, "that six ear trumpets be purchased for the purpose of benefiting some of the children's powers of hearing." There were five other deaf children being cared for by the Bristol Deaf and Dumb Institute. This Institute was taken over by the Bristol Education Committee in 1904 and the accommodation was increased to 45, with 44 in attendance including 11 from other Authorities. Later, the accommodation was increased to 55. By 1909, the school was full to capacity and had 23 boys and 32 girls. In 1910 there were 52 children in the school, including 11 resident scholars from other Authorities.

In this year also, a Day Class was started for partially-deaf children, which was held temporarily in the hall of the Pupil Teachers' Centre; sixteen children were on the registers. This class was believed to be the first of its kind in England. In 1912, there were 57 children on the registers at Kingsdown and 21 on the registers of the class for semi-deaf children.

In 1914, there were 44 boarder and 9 day pupils at the school and in that year the class for partially-deaf children was transferred from the Pupil Teachers' Centre to New Street, St. Jude's, where a school was set up for partially-deaf and partially-sighted children, there being 26 of the former and 33 of the latter in attendance in the first year. Both classes were then placed under one headmistress. At Kingsdown, in 1918, there were 44 residents and 9 day pupils, and at New Street, 35 partially-deaf pupils in the special class. The number of children attending the School for Partially-Deaf had risen to 37 in 1920 and 48 children (36 boarders and 12 day pupils) were at the school for the deaf. In 1922, the number of Bristol children at the School for the Deaf had fallen to 30 boarders with 10 day pupils and it was possible to take four boarders from other Authorities. In this year the Board of Education consented to the provision at New Street for partially-sighted and partially-deaf children being recognized as New Street Special School.

In 1924, the unsuitability of the buildings at New Street was recognized and it was considered desirable to seek fresh premises. The numbers of children at the School for the Deaf had fallen in 1927 still further to 16 Bristol boarders, with 12 day pupils, and 20 boarders from other Authorities. The Special School for partially-sighted and partially-deaf children was transferred from New Street School to Moorfields Council School in June, 1927. In 1928, the numbers on the registers were 34 at Moorfields School for partially-deaf, and 47 at Kingsdown, including 20 from other Authorities. Owing to the fact that nearly all the boarders at Kingsdown were children from other Authorities, it was decided, in 1933, to close the residential school for deaf children.

The disappointing experience of this Authority with this residential school for Bristol children situated in Bristol where it was found impossible, without legal means to compel the residence of children so severely handicapped as deaf children, should always be borne in mind by those who plan the future provision for handicapped children.

In this year (1933) the day-school at Moorfields School (now Russell Town) was re-organised to take deaf children in addition to partially-deaf and partially-sighted children. The numbers on the registers at the end of that year were 23 Bristol children in the deaf department, 25 in the partially-deaf and 68 in the partially-sighted. In this year also there is the first mention of Bristol deaf children being placed at schools elsewhere, two boys being admitted to the School for the Deaf at Exeter.

These arrangements continued up to the outbreak of war in 1939. During the war the deaf and partially-deaf school children were transferred to Ledbury Park, Herefordshire, and returned to Bristol in December, 1944, when the school was established at Shirehampton with 37 Bristol deaf children and 3 partially-deaf children. In November, 1947, the school was transferred to its present premises at Elmfield, Westbury-on-Trym. This was a private house, with excellent grounds and gardens, which has been quite well-adapted for the care of 48 children of whom 44 are deaf and 4 are rated as partially-deaf. There are, at present, eight children awaiting admission to the School for the Deaf and of these four are between 3 and 4 years of age, two are between 4 and 5 years and two are between 5 and 7 years of age. During the course of the year it has been found possible to start a Nursery Class and it is felt that this is a most valuable addition to the school. In addition, there is a class of eight pupils who have some hearing and derive benefit from a multitone group hearing aid, in a special sound-proof room.

The school suffers to some extent because of its distance from the centre of the city but the pupils are all conveyed to the school by the transport system which makes arrangements for all special-school children. It is proposed to seek authority for the admission of some eight more children, which would satisfy Bristol's immediate need. It is expected that the future provision for deaf children will include, in addition to that for day pupils from Bristol, residential accommodation for pupils from the surrounding country districts who do not live within easy travelling distance of the city.

It has always been recognized that a deaf child suffers a handicap in competition with his hearing fellows, and estimates have put this at an apparent 20 per cent. reduction in intelligence; this means that, to compete with a child of normal hearing and intelligence, a deaf child has to have a superior intelligence and, even then, the comparison will never be fair because of the lack of experience in speech and vocabulary which is the lot of the deaf child. When considering some deaf children, however, it is apparent that they are unable to profit by the lip-reading which is the normal method of communication used in schools for the deaf. Perhaps this may be a specific disability or it may be associated merely with lowered intelligence. The fact is that some 20 per cent. of deaf children find difficulty, or are actually unable to learn lip-reading, when by their achievements in performance tests they should be able to do so. It is usually undesirable to introduce finger-spelling in a school for the deaf although, on leaving school, most deaf children do learn this method of communication. In some schools in the country, finger-spelling is given to deaf pupils in the last year but, up to the present, that has not been thought desirable in the Bristol School for the Deaf.

The problem of the deaf/educationally-subnormal child, therefore, is that he needs, so far as we can see at present, finger-spelling as well as lip-reading to make it possible for him to communicate with his fellows in the outside world. Up to now, only one school, i.e., that run by the London County Council at Rayners Park, Penn, Buckinghamshire, has been available for this type of child but it is earnestly hoped that more schools of this nature will be available on a regional basis. It might be thought desirable that one such school should be established to serve the needs of the Western group of counties and county boroughs, based on the Bristol clinical area. Such a school would be residential and a suggested size of 40 places with provision for a larger number if necessary would seem adequate in the first instance. There is no doubt that if such a school were established many Authorities from outside the region would be desirous of securing accommodation in it for their own deaf/educationally-subnormal children.

The partially-deaf child remains an unsolved problem. This Authority had provision for partially-deaf children in premises on the same site as the School for the Deaf up to the outbreak of war. Since then no separate provision has been made for them. There are, at present awaiting placement, eleven partially-deaf children who are in the meantime in the ordinary schools with little hope, in most cases, of competing successfully with their fellows. An exception to this is a girl of 13 years, now in attendance at a Secondary Grammar School, who has a hearing loss of from 40 to 60 db. in the middle frequencies, and who appears to be holding her own quite well. She has taught herself lip-reading to some degree and sits in the front of the class in a good position to observe the teacher's face. The parents have been offered lip-reading lessons for the child, but these have been refused on the grounds that she is doing very well without them, which indeed is the case.

For the child who is not so bright, however, experiments are being tried with individual hearing aids. There are well-known difficulties with this apparatus and it seems

probable that children will not readily take to the aids until they can be prescribed in an individual manner for the hearing loss at the various frequencies. A child with high-frequency deafness, supplied with a hearing aid as at present constructed, may well be gravely disturbed by hearing with it loud booming noises which would drown the high-frequency sounds he needs to hear. Accounts such as that of Sheridan¹ of the experience of a child with a hearing aid are not encouraging.

Partial deafness may exist for a long time without discovery, and one child has come to our notice who has a hearing loss of from 70 to 80 db. on the right side and of 30 db. on the left side, and who is, in addition, of low intelligence. Up to the age of examination at 14 years, for another reason, the hearing loss had never been suspected, although there were slight speech changes which indicated that the child was not hearing high-frequency sounds. The need for the institution of group audiometer tests on all children at least once in their school lives is obvious, and this Authority conducted group tests before the war; since then, however, it has not been possible to recommence because of shortage of trained assistants and material.

In close association with the problem of deafness is that of inability to understand the spoken word. From the early idea of aphasia as "loss of speech" the term is now taken to cover all losses or failure to develop the use of language, including reading and writing as well as speaking and understanding speech. This is a problem which is far more widespread than is generally recognized. According to Ford² in children one can distinguish, apart from congenital deafness, only the two sorts of developmental word-deafness or the congenital auditory imperception which is specially associated with Worster-Drought,³ and developmental word-blindness, the alexia of Hinshelwood.⁴

Robert H (age 7 years) and *Martin H* (age 4½ years) are the only two children of their family. Robert is of superior intelligence according to performance tests but was regarded as of imbecile level at the age of 5 years because of lack of speech. He has a severe degree of deafness about the level of 50 to 80 db. loss in the middle frequencies in both ears. He has had a great deal of individual tuition at a private school, as a result of which his reading and number manipulation are at the level one would expect from a normal boy of his age, but he still has no spontaneous conversation and shows signs of maladjustment to his relations. Martin is at present in attendance at the Authority's School for the Deaf, in the Nursery Class, where he is quite obviously different from the deaf children. It has not been possible to test his hearing but it is certain that he hears to some degree, and it seems likely that he is, like his brother, of the partially-deaf/aphasic group of children. This is the only family in the city where there is known to be a similar condition in the sibs of affected children.

Tony E (age 6 years), at the age of 3½ years had a few single words only, and at the age of 5 years there was no response to any intelligence testing material. He was admitted to the junior school for the educationally-subnormal where the head teacher reported that "he needs more individual attention than can be supplied at the school." Tested on the Merrill-Palmer Scale by the Educational Psychologist, at the age of 5½ years, his intelligence was thought to be about the 50 I.Q. level. An attempt at audiometer test when he was almost 6 years old, failed to achieve any result. At this time he had said twenty words but it is thought that he understands the sense of most of what his mother says. His father's sister is stated to have spoken at the age of 7 years and is said to be normal now. It seems that this may be a severe case of developmental word-deafness. One has to assume that in these cases whatever process has resulted in the child's failure to appreciate speech, parts of the brain other than those used for symbol appreciation may have failed to develop or may have been injured, with the result that general intelligence is diminished.

As an example of this, *Susan F* (age 12 years), now in attendance at the Occupation Centre, has not been heard to say a word, understands very little of what is said to her and is, in every other way, at low imbecile level.

It is a fact, however, that many such cases of minor degree make sufficient recovery spontaneously for their speech to pass as normal in later life. *Marie H* (age 7 years) has six normal sibs and developed her own language, which her parents began to understand when Marie was five years old. She herself began to understand what was said to her at the age of six years when she went to the junior school for the educationally-subnormal. This child has a 40 to 60 db. loss of hearing in the upper frequencies with 30 db. loss in the middle frequencies, and hears whispers easily at 14-feet. Her speech was reported, at the age of 5 years, to be "just like that of Horace Hemsley" but now, like so many of these children do, she has learned to talk round the words with which she is unfamiliar. According to performance scale tests she has a superior intelligence.

Cerebral birth injury is responsible for some of the cases of failure to develop speech at the normal age. This is frequently associated with deafness. In nine out of 41 cases of cerebral birth injury there was a hearing loss of 30 or more db. in one or both ears. On the other hand, *Richard H* (now aged 12½ years) has nearly normal hearing, and has a spastic quadriplegia with microcephaly. His speech is still markedly defective but his reading rates at the 7-year level which is a remarkable achievement for his teachers.

At the age of 11 years his spontaneous speech was limited to "yes", a "no", and about a dozen nouns, and these indistinctly. Like most such cases it is difficult to estimate his latent intelligence but at present he is working at an I.Q. level of about 40.

Brian H (age 8 years) is an example of the difficulty of making the diagnosis between feeble-mindedness and defective hearing. It is impossible to test him with the audiometer and spontaneous speech is limited to half-a-dozen words. The mother, whose only child he is, reports that he hears the wireless and repeats parrot-fashion what he hears, and he was certainly able to repeat words spoken in a normal voice at a distance of 6 to 12 feet. An estimate of his intelligence at the age of 7 years on performance tests showed his mental age as over five years, with an I.Q. of approximately 70. There is some suggestion that he has been the subject of birth injury but, although the spontaneous muscular pattern is odd, there is no change in the muscular response on test nor are there localizing signs.

As an example of pre-natal causes of partial-deafness/asphasia, *Vivien C* (age 8 years) as a result of mother's rubella during pregnancy is markedly subnormal in physique, is almost blind in the right eye from corneal defects, is severely deaf to the level of 60 to 80 db. loss, and, although it is impossible to be sure of this, is suspected of congenital heart disease. Her intelligence has been estimated at an I.Q. of about 70, but this is regarded as indicating only that the child is not defective, and the general impression of the child is that she is of normal intelligence. Her speech is mostly confined to nouns, and miming, with which she makes herself understood adequately to her parents and playmates.

To combat the difficulty of assessment in these cases every effort must be made to find the nature of the defect and in pursuance of this policy the General Hospital is shortly to acquire a Hallpike-Dix⁵ peep-show apparatus, of which great things are hoped.

To these eight cases should be added a number of others in whose instance the difficulty is being met at ordinary school and it does appear that many such children of normal and near-normal intelligence can improve to such an extent that in later school-life they can compete adequately with their fellows. An excellent example of this, in relation to developmental word-blindness, is that recounted by Hill⁶ who gives a personal account of word-blindness which resolved at the age of 15 years. He gives a vivid impression of the stark terror from which he suffered during his schooldays when asked to read. *Marie H.* seems to be following his pattern and it is believed that *Robert H.* will also be able to return to normal school.

A cause of apparent aphasia is undoubtedly emotional difficulty. *Bobby H* (age 11 years) has an intelligence level variously estimated between 59 and 74 and is in attendance at the school for the educationally-subnormal. In the junior school he appeared to understand perfectly all that was said to him but did not speak or make any sound at all during the three months he was there, though he was reported to speak to other boys out of school. The psychiatrist reports that he was extremely inhibited and that his lack of speech function was largely due to inhibition on a functional basis. Audiogram subsequently showed that his hearing was normal. He has a stammer and there are home difficulties, but it is hoped that intensive speech therapy will help him to overcome his handicap. It may be that his emotional handicap is super-imposed on a handicap of organic basis and there are those who say that this is usually the case.

How many more such children as the above there are is unknown; clearly only the more obvious of these has been found, but it is proposed to make a searching enquiry to find the incidence of failures to develop symbol appreciation, with which will be associated those numbers of children who find it difficult to learn to read and write at the usual rate expected of them in the ordinary school.

REFERENCES

- ¹ SHERIDAN, Mary D.
The Child's Hearing for Speech. Methuen 1947.
- ² FORD, F. R.
Diseases of the Nervous System in Infancy, Childhood and Adolescence. C. C. Thomas.
- ³ WORSTER-DROUGHT, C.
Med. Press & Circ. 1943, p. 41 *Congenital Auditory Imperception (congenital word-blindness) and its relation to Idioglossia and allied Speech Defects.*
- ⁴ HINSHELWOOD, J.
Congenital Word-Blindness and Letter-, Word- and Mind-Blindness. H. K. Lewis & Co. Ltd., London 1917 and 1899.
- ⁵ HALLPIKE DIX, Peepshow.
B.M.J., 8.11.47.
- ⁶ HILL, Ronald (of H.M. Foreign Service).
B.J.Ophth. September, 1945.

NURSERY SCHOOLS AND CLASSES

There are 12 nursery schools under the Education Committee with accommodation for 835 children between the ages of 2 and 5. In addition 36 infant schools have nursery or baby classes accommodating in all 1,270 children between the ages of 3 and 5. All these nursery schools and classes remain full with long waiting lists, the number of children awaiting admission being over 1,500. As a result of the rise in the birth rate in recent years an increasing number of infant children will be due to enter school in the near future. In spite of the great demand for nursery places it will, unfortunately, be necessary to discontinue many of the nursery classes in order to make room for these children.

Details of medical inspections in nursery schools and classes during the year are as follows :—

					Periodic Exams.	Re-exams.
Nursery Schools .. .. .	..	..	..	..	544	1,951
Nursery Classes .. .. .	..	..	..	..	1,004	1,930
Number of Special Inspections and Re-Inspections					..	988

Classification of Nutrition.

	Number of children inspected.	“ A ” Good.		“ B ” Fair.		“ C ” Poor.	
		No.	%	No.	%	No.	%
Nursery Schools	544	222	40.8	300	55.1	22	4.1
Nursery Classes	1,004	465	46.3	479	47.7	60	6.0

Treatment of Minor Ailments.

No. of defects treated in clinics and at schools and classes	6,964
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Treatment of Defective Vision and Squint.

Errors of Refraction (including squint)	31
No. of pupils for whom spectacles were prescribed	..	..	..	12

Dental Inspection and Treatment.

No. of pupils inspected by the Dentist—	Periodic Inspections	..	..	1,445
	Special Inspections	..	..	114
TOTAL		..	..	1,559
No. found to require treatment	..	..	..	588
No. actually treated	..	..	..	291
Attendances for treatment	..	..	..	384
Extractions of temporary teeth	..	..	..	294
Fillings of temporary teeth	..	..	..	42
Administrations of general anaesthetics for extractions	..	..	..	167
Other operations on temporary teeth	..	..	..	339

MEDICAL TREATMENT OF THE PRE-SCHOOL CHILD

The following cases of children under school age were treated at the various clinics during the year :—

Eye Disease	..	..	..	..	..	145
Ear Disease	..	..	..	..	..	289
Skin Diseases	..	..	..	..	..	648
Minor Ailments	..	..	..	..	..	207
Aural Surgeon's cases	..	..	..	..	..	167
Eye Specialist's cases	..	..	..	..	..	141
Heart Specialist's cases	..	..	..	..	..	19
Orthopaedic Specialist's cases	..	..	..	..	..	294
Chiropody Clinic cases	..	..	..	..	..	18
Various	..	..	..	..	..	740
						2,668

INFECTIOUS DISEASES

Cases of measles among school children during the year numbered 2,111. School cases of scarlet fever totalled 344, whooping cough 434, and there were three cases of cerebro-spinal fever.

The number of cases of diphtheria occurring in children of school age during the year was 13 as compared with 22 in 1947 and no deaths from this disease were reported. Eleven cases of polio-myelitis occurred amongst children of school age in 1948 and there were no deaths among these cases.

During the year 404 patients of school age were admitted to the Infectious Diseases Hospital at Ham Green, the average stay per patient being 24.8 days.

Immunisation against Diphtheria.

The immunisation of school children against diphtheria was commenced towards the end of 1929 and in that year 415 children were given a full course of injections. The number of diphtheria cases occurring during that year was unusually high, there being 787 cases with 42 deaths, and the Committee were advised by the School Medical Officer to commence a campaign to persuade parents to allow their children to be immunised. This campaign was developed vigorously during the following year when more than five thousand children received a course of injections. Arrangements were made for these injections to be given at the schools attended by the children so as to cause the least interference with school work. The co-operation of the teachers was sought and they willingly gave their valuable support to this campaign. Efforts were also made through the Maternity and Child Welfare Department to effect the immunisation of children at an early age, a booster dose being given when these children entered school so as to reinforce the immunity. During the war a special effort was made and in 1943 it was estimated that about 70% of all school children in Bristol had been immunised. A marked fall in the number of cases of diphtheria amongst school children became noticeable about this time, the figures for 1945 being 46 cases with 2 deaths; 1946, 23 cases; 1947, 22 cases; 1948, 13 cases; there being no deaths from diphtheria amongst school children in the last three years. It may be fairly claimed that this striking result is due to the effects of immunisation.

During 1948, 1,242 children of school age received a full immunising course of inoculations against diphtheria.

The complete figures for the year are as follows:—

Number given full course of immunising inoculations	..	..	1,242
Number given a "booster" injection	..	..	3,430

It is estimated that approximately 70 per cent. of Bristol school children have now been immunised against diphtheria.

Diphtheria cases amongst school children, in the last 4 years :

1945	..	..	..	..	..	46
1946	..	..	..	..	..	23
1947	..	..	..	..	..	22
1948	..	..	..	..	..	13

None of these 13 cases had received injections for immunisation against diphtheria

PHYSICAL EDUCATION

Mr. J. Mc A. Milne, Chief Organiser of Physical Education, contributes the following report which has been compiled with the assistance of Miss C. E. Cooke, Senior Woman Organiser of Physical Education:—

"The standard of work in all types of schools has been steadily improving, mainly due to the additional Refresher Courses for teachers which have been held during the year. These Courses have covered infant, junior and secondary schools and included dance training, swimming, athletics, tennis, hockey and cricket courses. Over 500 classes attended the swimming baths each week during the summer months and about 200 during the winter. 3,096 Corporation Swimming Certificates were gained during the year, which was an increase of more than 1,000 on the previous season. 3,920 points were gained in Life Saving examinations, which was an increase of 152.8% on the average for the two previous years. This resulted in the local schools winning the Primary and Secondary Schools' National Shield for Life Saving.

Play Centres for school children and Games Centres for youths and adults were held during the summer months on the Committee's playing fields and a number of playing fields were available as Play Centres for school children during the summer holiday.

Considerable progress has been made during the year in acquiring additional playing field accommodation and the Committee now control and use approximately 300 acres.





The many and various types of creative movement performed freely by children on climbing apparatus, has led to a greater interest in movement generally. In some schools children and teachers are beginning to discover that there are many more ways of using their limbs and bodies than they had at first suspected, and this discovery leads in turn to further experiment demanding more control and greater skill.

The mobility of the spine is greatly increased when facilities are given for movements to be taken in lying, kneeling, sitting and hanging positions. The reversed position of the body gives much satisfaction to many children both physically and mentally. Quite young children show unexpected powers of observation when once their interest in movement is aroused, and this not only makes for greater understanding of the type of effort needed but also gives the children a feeling of confidence and enjoyment in trying to achieve their purpose.

The creative urge of children is already largely recognised in music and painting, but barely considered in the education of movement. So little is known about how children move when their creative powers have been awakened, and though it is generally acknowledged that the principal means of expression in young children lies in bodily movement, adult forms of exercises made up by adults are still often considered adequate for children. The satisfaction that children gain by producing a movement of their own has an important bearing on their sense of freedom and lack of self-consciousness.

It is essential that the teacher herself becomes aware of deficiencies and is able to give the necessary guidance to purposeful movement and so ensures that each child makes the maximum effort.

Individual achievement contributes to group effort, and thus to the harmony of the whole." (*See illustrations*).

MEALS AND MILK SERVICE

At the end of the year, 2,336 children were receiving free dinners and 20,603 on payment; 56 kitchens were supplying meals at this time to 184 canteens in all types of schools.

Facilities for the distribution of dinners and milk during the holidays were made available where necessary but the demand was small compared with term time; 495,843 free dinners were supplied to "necessitous" children during the year as compared with 473,410 in 1947. The number of dinners supplied on payment, excluding those supplied to staff and certain other educational establishments, was 3,934,569 as compared with 3,477,255 in 1947.

From a return taken in October, 1948, 43,658 children were supplied with milk daily.

SCHOOL MEALS SERVICE

Every endeavour is made in the School Meals Service to use the full quantity of rationed goods allowed by the Ministry of Education and by the Ministry of Food. In addition so far as possible fresh vegetables are utilised each day. On occasion dried vegetables are served in order to give a greater variety in the menu. Fresh fruit is included as often as possible. The five days allocation of meat is used on the four school days and either ham, fish, cheese, sausages or liver is used on the fifth day. Cheese and parsley sauce and mayonnaise are sent with the appropriate dishes so that children may learn to eat dishes which in many cases they are unable to get at home and also in order to add more goodness and appetising character to the meal. Colour plays an important part in helping to encourage the children to try new dishes and to get them to eat those already known. It is interesting to note that a salad meal is a favourite with the children and that this is in some respect due to the different colours of the grated vegetables. The following is a specimen menu of meals supplied in a self-contained canteen during a week to school children:—

Cold meat, salad, mayonnaise, potatoes boiled or mashed.
Steamed fruit pudding and custard (winter).
Jam tart and custard (summer).

Roast meat, potatoes, cabbage, gravy.
Trifle.

Meat pie, potatoes, green peas or carrots, gravy.
Milk pudding and jam or stewed fruit and custard.

Cheese pie, cheese sauce, mixed root vegetables, potatoes.
Chocolate crunch and pink sauce.

Hot-pot, cabbage or cauliflower, potatoes.
Fresh fruit crumble and custard.

Mr. F. J. Redstone, F.R.San.I., F.S.I.A., Chief Sanitary Inspector, reports:—
School Milk.

“Close control is exercised over the milk supplied to the school children of Bristol. The milk is obtained from firms which possess pasteurising licences, and the entire milk supply is of a pasteurised milk standard.

Each week samples of the milk are taken on delivery to the schools. This enables tests to be made for efficiency of pasteurising treatment, quality and purity of supplies.

In addition to the sampling at the schools the sanitary inspectors carry out routine supervision of the dairies at which the milk is processed.”

Food Supply to School Kitchens.

“The Health Department carry out a general supervision over the foodstuffs supplied to the kitchens and sampling is frequently performed in connection with quality and condition. Furthermore, wherever the supervisor has any reason to believe that a commodity is out of condition or that, for any other reason, expert advice is necessary, the services of the food inspectors are available.

During 1948, there were two outbreaks of food poisoning associated with meals taken at school. One involved 24 children and 9 staff and was confined to one school, and the other outbreak involved several schools and some 70 persons.

In view of the tremendous increase in the provision of school meals, head teachers are advised that, wherever possible, in the event of any suspicion of the meals being responsible for cases of illness, they should contact the Health Department immediately. Delay at this stage offers serious obstruction to the value of subsequent investigation.

The very large number of people “at risk” being supplied with meals by the Education Department, makes it essential that the greatest care should be taken from the hygiene and health aspects. Whatever improvements may be obtained in facilities, equipment and premises, there still remains the vital question of personal hygiene. Arrangements have been made for members of the Health Department to give talks and lectures to kitchen staffs on this subject.

There is an undoubted necessity for the closest supervision to be exercised in these matters if the school meals service is to be run on clean and safe food lines.

School Kitchens and Canteens.

“A survey is being made of all the school kitchens in the city so that the general standards in all such premises may be raised to the desired level in construction, operation and hygienic conditions. Advice is given to the food handlers in collaboration with the supervisors on the most suitable and available means of sterilisation at the present time, pending the installation of appropriate equipment.”

CO-OPERATION OF PARENTS.

The number of parents present at primary and secondary school medical inspections was as follows:—

	No. <i>Examined.</i>	Parents <i>present.</i>	Per <i>cent.</i>
Entrants	5,862	4,943	84.3
Second Age Group ..	5,595	3,730	66.6
Third Age Group ..	3,433	956	27.8
TOTAL	14,890	9,629	64.7

EMPLOYMENT OF CHILDREN

The Employment of Children Inspector reports:—

“During the year ended 31st December, 1948, there were 1,239 cases of infringement of the Bye Laws made in pursuance of the Children and Young Persons Act, 1933 (as amended by the Education Act, 1944):—

By Employers:—

Minor offences	512
Failure to submit half-yearly reports	143
By Parents	507
By Street traders	26
Prosecutions, Final Notices, Refusals, etc. ..	51

1,239

These were dealt with as follows :—

Warned	1,188
Final Notices—	
to employers	20
to parents	1
Prosecutions taken	5
Prosecutions pending	1
Employment Cards—	
Refused	23
Revoked	1
	<hr/>
	1,239
	<hr/>

During the year, 316 children between the ages of 13 and 15 years were registered to be employed in deliveries, etc., in connection with the following trades :—

	<i>Boys</i>	<i>Girls</i>
Baker	—	1
Boot and Shoe	—	1
Butchers	13	—
Chemist	1	—
Greengrocers	5	—
Grocers	12	—
Ironmonger	1	—
Laundry	1	—
Library	—	1
Newsagents	267	8
Stationer	—	1
Tailors	4	—
	<hr/>	<hr/>
Totals	304	12
	<hr/>	<hr/>

Eighty-five Employment Cards held by children between the ages of 13 and 14 years were cancelled when the new Bye Laws became operative on 1st August, 1948.

One licence was issued, one renewed and two cancelled for street-trading by young persons under the age of 18 years.

Public Entertainments.

Forty-four licences for children to take part in public entertainments in local theatres, in accordance with Section 22 of the Children and Persons Act, 1933, were granted as follows :—

Bristol Education Committee	4
Birmingham Education Committee	28
Cornwall County Council	1
Somerset County Council	5
Surrey County Council	5
Warwick County Council	1
	<hr/>
	44
	<hr/>

Applications refused by Bristol Education Committee, 10.

3,077 children were granted permission by the Committee to take part in 77 entertainments given for charitable purposes.

Theatres, halls, dressing-rooms, lodgings and schools were visited to ascertain that the conditions under which these children were employed were satisfactory."

STATISTICAL TABLES

YEAR ENDED 31ST DECEMBER, 1948

TABLE I. MEDICAL INSPECTION OF PUPILS ATTENDING MAINTAINED PRIMARY AND SECONDARY SCHOOLS.

A.—PERIODIC MEDICAL INSPECTIONS.

1947	1. Number of Inspections in the prescribed Groups :—	1948
7,298	Entrants	5,8
5,128	Second Age Group	5,8
1,959	Third Age Group	3,1
14,358	TOTAL	14,7
3,192	2. Number of other Periodic Inspections	1,1
17,577	GRAND TOTAL	16,8

B—OTHER INSPECTIONS.

31,688	Number of Special Inspections	32,2
24,027	Number of Re-inspections	30,2
55,715	TOTAL	62,2

C.—PUPILS FOUND TO REQUIRE TREATMENT.

NUMBER OF INDIVIDUAL PUPILS FOUND AT PERIODIC MEDICAL INSPECTION TO REQUIRE TREATMENT
(Excluding Dental Diseases and Infestation with Vermin.)

1947			GROUP.	1948		
For Def. Vision.*	For any other condn.	Total Individ. pupils.		For Def. Vision.*	For any other condn.	Total Individ. pupils.
129	800	920	Entrants	70	708	778
96	391	483	Second age group	132	451	583
58	100	141	Third age group	141	345	486
283	1,291	1,544	Total (prescribed groups)	343	1,504	1,847
83	112	191	Other Periodic Inspections	35	47	82
366	1,403	1,735	GRAND TOTAL	378	1,551	1,929

* Excluding Squint.

TABLE II.

A.—RETURN OF DEFECTS FOUND BY MEDICAL INSPECTION.

1947					1948			
PERIODIC INSPECTIONS.		SPECIAL INSPECTIONS.			PERIODIC INSPECTIONS.		SPECIAL INSPECTIONS.	
No. of Defects.		No. of Defects.			No. of Defects.		No. of Defects.	
q. m't.	Req. obs. but not treatm't.	Req. treatm't.	Req. obs. but not treatm't.		Req. treatm't.	Req. obs. but not treatm't.	Req. treatm't.	Req. obs. but not treatm't.
15	—	3,878	15	Skin	48	21	3,845	102
20	137	171	1	Eyes—(a) Vision ..	378	67	574	38
34	2	12	1	(b) Squint ..	31	12	27	4
14	20	892	2	(c) Other ..	16	18	1,074	31
29	8	41	—	Ears—(a) Hearing ..	43	19	65	15
2	1	496	2	(b) Otitis Media ..	5	4	647	7
24	8	1,105	9	(c) Other ..	43	28	1,171	21
72	399	2,519	58	Nose or Throat ..	474	387	2,220	297
39	19	33	1	Speech	32	43	36	18
28	108	372	7	Cervical Glands ..	20	64	377	34
59	136	168	5	Heart and Circulation	86	127	135	38
75	155	811	21	Lungs	126	176	792	144
				Developmental—				
11	5	7	—	(a) Hernia	15	6	7	3
1	—	—	—	(b) Other	1	—	3	—
				Orthopaedic—				
80	35	—	—	(a) Posture	74	55	18	10
27	10	—	—	(b) Flat Foot ..	39	12	12	2
17	34	191	5	(c) Other	116	46	110	41
				Nervous system—				
	—	4	—	(a) Epilepsy ..	—	1	7	—
9	12	97	3	(b) .. Other ..	11	28	57	15
				Psychological—				
22	19	5	—	(a) Development ..	17	30	21	6
1	1	5	—	(b) Stability ..	20	1	25	1
136	415	11,401	373	Other	496	168	10,850	1,121

CLASSIFICATION OF THE GENERAL CONDITION OF PUPILS INSPECTED DURING THE YEAR IN THE AGE GROUPS.

Age Groups.		No. of Pupils Inspected.	A. (Good).		B. (Fair).		C. (Poor).	
			No.	% of col. 2.	No.	% of col. 2.	No.	% of col. 2.
Infants		5,862	1,944	33.17	3,426	58.43	492	8.4
Second Age Group		5,595	1,904	34.04	3,348	59.85	343	6.2
Third Age Group		3,433	1,411	41.10	1,862	54.24	160	4.66
Under Periodic Inspections..		1,406	522	37.13	772	54.91	112	7.96
TOTAL		16,296	5,781	35.48	9,408	57.73	1,107	6.69
1947 TOTAL		17,577	7,365	41.89	9,205	52.38	1,007	5.73

TABLE III. TREATMENT TABLES.

GROUP I.—MINOR AILMENTS (excluding uncleanness).

<i>No. of Defects treated, or under treatm't during the year.</i>		<i>No. of D treated, under treat during year.</i>
1947		1948
	Skin—	
	Ringworm—Scalp—	
5	(i) X-Ray treatment	3
59	(ii) Other treatment	22
256	Ringworm—Body	46
747	Scabies	68
1,043	Impetigo	2,70
2,540	Other skin diseases	2,20
	Eye Disease—(External and other, but excluding errors of refraction, squint and cases admitted to hospital)	2,41
1,823	Ear Defects	25,8
1,668	Miscellaneous—(e.g., minor injuries, bruises, sores, chilblains, etc.)	
20,554		
28,695	TOTAL	34,58
239,639	Total number of attendances at Authority's minor ailments clinics ..	283,1

GROUP II.—DEFECTIVE VISION AND SQUINT

(excluding Eye Disease treated as Minor Ailments—Group I).

<i>No. of defects dealt with</i>		<i>No. of d dealt with</i>
1947		1948
4,456	Errors of Refraction (including squint)	4,1
48	Other defect or disease of the eyes (excluding those recorded in Group I)	
4,504	TOTAL	4,1
	No. of Pupils for whom spectacles were—	
2,109	(a) Prescribed	1,9
2,084	(b) Obtained	1,4

GROUP III.—TREATMENT OF DEFECTS OF NOSE AND THROAT

<i>Total Number Treated, 1947</i>		<i>Total Number Treated, 1948</i>
	Received operative treatment—	
1,152	(a) for adenoids and chronic tonsilitis	1,5
34	(b) for other nose and throat conditions	1
364	Received other forms of treatment	5
1,550	TOTAL	2,2

GROUP IV.—ORTHOPAEDIC AND POSTURAL DEFECTS.

1947		1948
76	(a) Number treated as in-patients in hospitals or hospital schools ..	147
629	(b) Number treated otherwise, e.g., in clinics (schools or out-patient departments)	339

GROUP V.—CHILD GUIDANCE TREATMENT AND SPEECH THERAPY

1947	Number of pupils treated—	1948
396	(a) under Child Guidance arrangements	608
163	(b) under Speech Therapy arrangements	155

TABLE IV.—DENTAL INSPECTION AND TREATMENT

1947		1948
	(1) Number of pupils inspected by the Authority's Dental Officers—	
5,841	(a) Periodic age groups	38,850
2,973	(b) Specials	3,090
3,814	(c) TOTAL (Periodic and Specials)	41,940
8,393	(2) Number found to require treatment	28,638
4,243	(3) Number actually treated	25,851
6,507	(4) Attendances made by pupils for treatment	39,169
	(5) Half-days devoted to :—	
357	(a) Inspection	324
3,680	(b) Treatment	*3,700
4,037	TOTAL	4,024
14,989	(6) Fillings : Permanent Teeth	14,549
1,368	Temporary Teeth	1,044
16,357	TOTAL	15,593
4,487	(7) Extractions : Permanent Teeth	4,285
21,080	Temporary Teeth	21,398
25,567	TOTAL	25,683
12,917	(8) Administration of general anaesthetics for extraction	13,157
	(9) Other Operations :	
7,070	Permanent Teeth	7,385
5,078	Temporary Teeth	7,777
12,148	TOTAL	15,162

In addition 465 sessions were devoted to the treatment of mothers and young children.

TABLE V. INFESTATION WITH VERMIN.

1947		1948
169,125	(i) Total number of examinations in the Schools by the School Nurses or other authorised persons	147,853
4,320	(ii) Total number of individual pupils found to be infested	3,399
173	(iii) Number of individual pupils in respect of whom cleansing notices were issued (Section 54 (2), Education Act, 1944)	164
109	(iv) Number of individual pupils in respect of whom cleansing orders were issued (Section 54 (3), Education Act, 1944)	136

TABLE VI. SUMMARY OF WORK DONE DURING THE YEAR.

1947		194
	School Medical Officers :—	
687	No. of Visits to Schools for Periodic Inspection	7
17,577	No. of Children Examined at Periodic Inspection in Schools ..	16,2
1,604	No. of Re-examinations in Schools	2,0
	Dental Surgeons :—	
42,250	No. of Children Examined—Periodic Inspections	38,8
3,077	Special Inspections	3,0
24,562	No. of Children treated	28,6
	School Nurses :—	
	<i>Cleanliness Survey.</i>	
2,497	No. of Visits to Schools	3,0
169,125	No. of Examinations of Children	147,8
2,093	No. of Homes visited for uncleanness	1,6
3,172	No. of Homes visited for "following-up" etc.	2,1
	<i>Preparation for Medical Inspection.</i>	
697	No. of Visits to Schools	8
19,854	No. of children prepared	16,5

TABLE VII. SCHOOL CLINICS.

1947		1948
No. of Attendances.	Work.	No. of Attendances.
57,931	Central Health Clinic .. Inspection clinic ; treatment of minor ailments : asthma clinic ; ear, nose and throat clinic ; zinc ionisation ; dental treatment ; orthodontic treatment ; refraction clinic ; X-ray treatment of ringworm ; treatment of scabies cases ; orthopaedic clinic ; remedial exercises ; electrical treatment ; massage and foot treatment.	59,68
—	Brislington Clinic .. Inspection clinic ; treatment of minor ailments	3,95
859	Hotwells Treatment Centre .. Treatment of minor ailments	86
40,514	Bedminster Health Centre .. Inspection clinic ; treatment of minor ailments : ear, nose and throat clinic ; dental treatment and refraction clinic.	49,66
6,601	South Bristol Baths Clinic .. Treatment of minor ailments	7,58
17,042	Knowle Casualty Station .. Treatment of minor ailments	21,30
2,765	Broadfield Road Clinic .. Treatment of minor ailments	1,64
33,010	Speedwell Health Centre .. Inspection clinic ; treatment of minor ailments ; ear, nose and throat clinic ; dental treatment and refraction clinic.	39,70
5,500	Verrier Road Clinic .. Treatment of minor ailments	4,61
14,518	Portway Clinic Inspection clinic ; treatment of minor ailments ; ear, nose and throat clinic ; dental treatment and refraction clinic.	19,15
26,282	Southmead Clinic .. Inspection clinic ; treatment of minor ailments ; ear, nose and throat clinic ; dental treatment, orthodontic treatment and refraction clinic.	32,42
1,239	Day E.S.N. Special Schools .. Treatment of minor ailments	1,35
15,028	Novers Open Air School .. Remedial exercises and massage ; treatment of minor ailments.	19,61
2,157	Chest Clinic Chest Ailments	2,31
1,074	Cardio-rheumatic Clinic .. Cases of heart disease and acute rheumatic infection.	1,15
9,694	Artificial Light Clinic .. Cases of anaemia and debility	12,87
1,571	Child Guidance Clinic	1,72
2,930	Speech Clinics	3,21
278	Orthoptic Clinic	8
70	Dental Hospital	54
239,639	Total Attendances	283,531
The number of attendances at the Central Health Clinic does not include school children who availed themselves of the facilities offered for Mass Radiography.		

TABLE VIII. NUTRITION.

No. of cases referred for treatment and observation from medical inspection, etc.

1947		1948
	Routine Medical Inspection	
5,577	No. examined	16,296
16	Referred for treatment for malnutrition	19
—	Recommended milk or meals	—
—	Recommended C.L.O.M., etc... .. .	—
278	Recommended observation for malnutrition	284
	Nurses' Survey—	
9,991	No. surveyed	91,353
10	No. referred to Clinic for malnutrition	—
264	No. advised to have milk at school	142

TABLE IX. MILK AND MEALS

1947		1948
473,410	Free meals supplied	495,843
7,948,473	Free milk supplied (bottles)	8,849,799

TABLE X. SCHOOL NURSES

1947		1948
	Following is a summary of the Nurses' Survey for the year:—	
1,586	No. of sessions	2,657
58,991	No. of children surveyed	91,353
4,122	No. with defects	4,231
	Of the cases with defects:—	
431	No. already under treatment	472
1,375	No. referred to doctor	2,308
1,285	No. referred to Doctor for Eye Specialist	573
600	Minor Ailments referred for treatment	640
264	Underweight children advised to have milk in school	142
144	Will attend own doctor or Hospital	92
23	Refusals	4
	Of the cases referred to Clinic Doctor:—	
902	No. requiring treatment or observation	462
35	No. discharged—no treatment or observation required	8
1	No. already obtained treatment	4
	The defects referred to Clinic Doctor requiring treatment, or to be kept under observation, were:—	
202	Skin	202
31	Scabies	7
26	Eye disease	18
46	Defective vision	22
30	Ear disease	17
223	Nose and Throat	99
2	Teeth	—
3	Lungs	—
31	Deformities	6
10	Malnutrition	—
287	Other defects or diseases	94
904		465
2,497	Total number of visits to schools in respect of verminous condition and general examination during the year	3,080
169,125	Total number of examinations made	147,853
3,180	Number of re-examinations (included in above total)	1,661

